



**City of Newton**

**TRANSPORTATION ADVISORY COMMITTEE**

**Recommendations to**

**Mayor Setti D. Warren**

**November 17, 2011**

## **INTRODUCTION**

Newton's transportation systems connects the city's residents, businesses and visitors to each other and to jobs, schools, goods and services, and recreational and cultural opportunities in Newton and throughout the greater Boston region. Even while the city's population grows only modestly, traffic and tripmaking are steadily increasing. Transportation-related issues are among the most pressing quality-of-life issues cited by Newton residents. In order to address these critical issues, in July, 2010 Mayor Mayor Setti D. Warren convened the Transportation Advisory Committee in order to undertake a wide-ranging review of transportation issues in Newton and asked that I chair the TAC.

This document represents hundreds of hours of work by a dedicated group of Newton citizens, working in collaboration with City staff from the Planning & Development, Engineering, Public Works, Police and other departments and with the input of the general public. I believe that the TAC has indeed fulfilled the charge that was set out, which was to "Recommend an overall framework that can shape a longer-term transformation of Newton's transportation systems, while also providing short- and mid-term recommendations to begin implementing that framework right away."

In order to both define a long-term vision for a transportation system and ensure that actions are taken right away to implement that vision, this report includes recommendations for:

- An overarching set of citywide transportation goals to guide the decision-making of all city departments and staff whenever they are making transportation, planning, land use or other decisions that may affect the City's transportation system;
- Creation of a new system of coordinating and implementing transportation decision-making including a permanent Transportation Advisory Group, bicycle and pedestrian coordinators and the eventual evolution of the new interdepartmental Transportation Team and Transportation Division in the Department of Public Works into a true Transportation Department;
- A series of executive orders and planning efforts, issued according to specific timetables, to create a new transportation policy and planning framework for Newton, including a Complete Streets policy, bicycle master plan, urban fabric master plan and parking management plan; and
- A host of specific recommendations, large and small, on issues ranging from safety to urban fabric and address the needs of youth, seniors and everyone in between – everyone who travels in Newton whether they drive, use transit, walk or bike.

I thank my fellow TAC members for their enthusiasm and hard work and look forward to a future in which Newton's transportation planning, policies and systems help make Newton an even more wonderful place to live.



Stephanie Pollack  
TAC Chair

### **Members of the Transportation Advisory Committee and Subcommittees**

Stephanie Pollack – Chair of the Transportation Advisory Committee

Alicia Bowman – Subcommittee Chair, Youth and Senior Travel

Anatol Zukerman – Subcommittee Chair, Urban Fabric

Mark Jurilla – Subcommittee Chair, Outreach and Engagement

Matt Cuddy – Subcommittee Chair, Parking

Sean Roche – Subcommittee Co-Chair, Transportation Planning and Complete Streets

Srdjan Nedeljkovic – Subcommittee Co-Chair, Transportation Planning and Complete Streets

Adam Peller - Transportation Planning and Complete Streets

Amy Beckler - Youth and Senior Travel

Anatol Zukerman - Transportation Planning and Complete Streets

Andrea Steenstrup - Youth and Senior Travel

Bill Renke - Transportation Planning and Complete Streets

Bill Wolk - Youth and Senior Travel

Candace Havens - Parking

Charlie Russo - Urban Fabric

David Koses - Transportation Planning and Complete Streets

David Stein - Transportation Planning and Complete Streets

Frank Wolpe - Outreach and Engagement

Helen Rittenberg - Outreach and Engagement, Parking, Transportation Planning and Complete Streets, Youth and Senior Travel

James Danila - Transportation Planning and Complete Streets

Jane O'Hern - Transportation Planning and Complete Streets

Jayne Colino - Youth and Senior Travel

Jenny Gamson - Youth and Senior Travel

Jerome Grafe - Parking, Transportation Planning and Complete Streets

Jo Gourdeau - Outreach and Engagement

Joanne Wyndham - Transportation Planning and Complete Streets

John Bliss - Youth and Senior Travel

John Sisson - Urban Fabric

Judy Berlin - Transportation Planning and Complete Streets, Urban Fabric

Ken Tempkin - Youth and Senior Travel

Linda Wolk - Youth and Senior Travel

Lisa Conti - Outreach and Engagement

Lois Levin - Outreach and Engagement, Parking, Transportation Planning and Complete Streets, Urban Fabric, Youth and Senior Travel

Lucia Dolan - Outreach and Engagement, Youth and Senior Travel

Lucia Grigoli - Youth and Senior Travel

Lucia Kamm - Outreach and Engagement

Mark Jurilla - Parking

Marsha Lazar - Youth and Senior Travel

Mary Lee Bellville - Outreach and Engagement, Transportation Planning and Complete Streets  
Marynka Burns - Transportation Planning and Complete Streets  
Maureen Vahey - Outreach and Engagement  
Molly Schaeffer - Transportation Planning and Complete Streets  
Nathan Aronow - Transportation Planning and Complete Streets  
Nathan Phillips - Parking  
Regina Moody - Youth and Senior Travel  
Sean Roche - Parking  
Seth Zeren - Urban Fabric  
Stephanie Pollack - Parking, Transportation Planning and Complete Streets  
Srdjan Nedeljkovic - Parking  
Stephen Linsky - Youth and Senior Travel  
Toni Hicks - Transportation Planning and Complete Streets  
Tricia Bombara - Youth and Senior Travel  
Trudy Reilly - Transportation Planning and Complete Streets

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## Subcommittee/Topic: Citywide Transportation Goals

### Recommendation:

The TAC recommends that the Mayor issue an Executive Order providing for the adoption of the following set of Transportation Goals which shall guide the decision-making of all city departments and executive staff whenever making transportation, planning, land use or other decisions that may affect the City's transportation system. These goals shall also guide the participation of Newton representatives when advocating for regional and statewide transportation policies and investments.

**1. Real Options:** Newton's transportation system will provide Newton residents and visitors with a variety of options for getting to work, school, shopping, recreation and other destinations. Newton's transportation system will provide real options for everyone, including those too young or too old to drive, those having disabilities that preclude or limit driving and those who choose not to drive for budgetary, health or environmental reasons.

**2. Quality of Life:** Newton's transportation system and policies will support and advance a broader vision for the Newton that we all want to live in, maintaining the quality of life in our neighborhoods and village centers and reducing the negative impacts of traffic and congestion on those neighborhoods and village centers.

**3. Reducing Driving and Strengthening Alternatives:** Transportation policies, investments and decision-making will focus on reducing motor vehicle travel, particularly cut-through traffic and solo driving. While driving will remain an important option for many trips, the City will work to strengthen alternatives including walking, biking, and public transportation and to capture more of the costs of motor vehicle travel from those who drive.

**4. Safety:** Safe travel will be a top priority and transportation policies, investments and enforcement strategies will be based on the principle of "safety first" so that everyone (from children to seniors and including pedestrians, bicyclists and scooter riders) feels safe and so that motorists, bicyclists and pedestrians alike practice safe travel behavior.

**5. Balance:** Transportation policies, investments and decision-making will be designed to address and improve performance across all modes of travel and balance the needs of all users of the transportation system (including drivers, pedestrians and bicyclists) rather than focusing solely on a single transportation mode or element of the problem (for example, traffic congestion).

**6. Smart Growth:** Creating real transportation choices and reducing driving will require changes to Newton's development patterns and therefore all transportation, planning and land use decisions will support walkable, mixed-use and higher density development (particularly where transit is or will be available) in order to enable more walking, biking and use of public transportation.

**7. Consistency:** Transportation policies, investments and decision-making will also be consistent with and support the City of Newton's goals and policies with respect to reducing greenhouse gas emissions and promoting healthy lifestyles for all residents.

**Brief Statement of Underlying Principle or Intent of Recommendation:**

In addition to the specific recommendations made by the TAC, it is important for the mayor to adopt an overall set of goals to govern all of the transportation and related decision-making in Newton. The objective of these goals is for Newton to have a balanced, well performing transportation network. Because the current system is so imbalanced in favor of cars, the goals focus on reducing driving and increasing use of alternatives. Even a small reduction in driving in Newton should help improve traffic flow, so reducing the number of cars on the road is good for everyone in Newton, including drivers.

**Action Required:**

Adoption of an Executive Order.

**Recommended Timeline:**

Within 30 days after presentation of final TAC recommendations to the Mayor.

**Staffing or Other Resources needed:**

None.

**Cost implications:**

None.



## **Subcommittee/Topic: Governance/Bicycle and Pedestrian Coordination**

### **Recommendation:**

The Mayor should designate a Bicycle Coordinator and a separate Pedestrian Coordinator in order to coordinate issues relating to biking and walking, respectively, across all city departments and to facilitate the adoption of policies and the implementation of projects to serve cyclists and pedestrians. The Mayor should also create and appoint the members of an official City of Newton Bicycle and Pedestrian Advisory Committee to provide broad-based citizen input, and assist in the work of, the Bicycle Coordinator and Pedestrian Coordinator.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

In its September 2010 safety-related recommendations, the TAC recommended as follows:

“The Mayor should immediately designate a Bicycle and Pedestrian Coordinator to address all pedestrian and bicycle pedestrian issues, including safety issues, across all city departments. The coordinator should oversee internal coordination across all city departments to expedite consideration and implementation of all bicycle and pedestrian-related issues . . . .”

This recommendation builds on that prior recommendation. After additional consideration, the TAC has concluded that the work to be done (including that recommended elsewhere in these recommendations) on both bicycle and pedestrian issues requires two separate coordinator positions. A dedicated Bicycle Coordinator is also helpful in order for Newton to win certification as a Bicycle Friendly Community by the League of American Bicyclists.

The TAC also recommends the creation of an official City of Newton Bicycle and Pedestrian Advisory Committee, which could either be a freestanding committee or a subcommittee of the Transportation Advisory Group (see related recommendation). The City of Newton is blessed with three citizen groups actively working on bicycle and pedestrian issues: the Bicycle/Pedestrian Task Force (a citizen group which works to increase bicycle and pedestrian awareness and facilitation), Bike Newton (a non-profit organization working to make Newton bicycle-friendly) and the Newton Safe Routes Task Force (a task force comprised of parents and city employees committed to encouraging more walking, cycling and bus use and to reducing congestion and pollution from the front of Newton schools). The City itself, however, has no official body for receiving citizen input on bicycle and pedestrian issues and the TAC believes that such a body is needed to ensure the timely implementation of the TAC’s recommendations with respect to biking and walkability.

### **Action Required:**

The Mayor should designate separate Bicycle and Pedestrian coordinators and create and appoint the members of a Bicycle and Pedestrian Advisory Committee.

### **Recommended Timeline:**

Coordinators should be named and the advisory committee designated and functioning by no later than December 1, 2011.

### **Staffing or Other Resources needed:**

If current staffing and budgetary constraints preclude the designation of city staff as Bicycle Coordinator and Pedestrian Coordinator, then the positions could be filled by volunteers supported by existing staff from the Planning and Development Department.

**Cost implications:**

Staffing costs if the coordinator positions are filled by city staff; none if the positions are filled by volunteers.

## **Subcommittee/Topic: Governance/Citywide Policy Adoption**

### **Recommendation:**

Whenever possible, the executive departments with responsibility for transportation projects and transportation-related land use decisions should act pursuant to written policies rather than on a case-by-case basis. In order to move to such a policy-based approach the Transportation Team, working with the new Transportation Advisory Group, should develop a complete list of policies needed to implement all TAC recommendations and then prioritize the development of such policies.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Many transportation and land use decisions in Newton are made on a case-by-case basis rather than pursuant to overarching policies designed to guide decisions with respect to specific projects. Even when policies have been put in place, many are informal, without public input into their development and sometimes not even reduced to writing. In order to implement the Transportation Goals recommended by the TAC and achieve more consistent and progressive transportation policies and projects, the City of Newton should seek to develop a set of written policies to guide decision making on specific projects by the Planning and Development, Public Works and School departments as well as by the Traffic Council. The TAC recommendations already include numerous recommendations with respect to specific policies (e.g. context sensitive design, Complete Streets, transportation elements in special permits). The TAC therefore recommends that the Transportation Team, working with the new Transportation Advisory Group, develop a complete list of policies needed to implement the TAC recommendations and then prioritize the development of such policies. Development of these new policies should involve input from appropriate staff across all relevant executive departments, from the Board of Alderman where appropriate and from the public. All policies, once finalized, should be in writing. Once a relevant policy has been developed, subsequent decisions on specific projects and decisions by both executive departments and the Traffic Council should be based on those policies.

### **Action Required:**

Policies that govern executive agencies can be developed and adopted by those agencies or through an Executive Order. Policies that govern the decisions of Traffic Council would also have to be adopted by Traffic Council.

### **Recommended Timeline:**

Develop a prioritized list of needed policies by Spring 2012, with a goal of completing all policies needed to fully implement all TAC recommendations by December 31, 2012.

### **Staffing or Other Resources needed:**

While staff resources will be needed to research, develop and write policies, this approach could ultimately save staff resources because the additional investment of staff time to develop policies should reduce the time spent on specific decisions and projects as those policies are applied.

### **Cost implications:**

Staffing costs only.

## **Subcommittee/Topic: Governance/Traffic Council**

### **Recommendation:**

Decisions on specific transportation projects by the Traffic Council should be consistent with the recommendations of this Transportation Advisory Committee and should whenever possible be made by applying written policies, developed through a public process, to the facts and context of specific projects. The ordinance creating the Traffic Council should be reviewed and, if appropriate, amended in order to ensure that the Traffic Council's jurisdiction is limited to those situations in which decision making by such a public body is necessary and appropriate (as opposed to those projects where professional staff can appropriately make the decision). In addition, the appeals process should be changed to require the filing of an appeal by three or more members of the Board of Alderman (including at least one from outside the ward within which a transportation/traffic matter is being considered).

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Many transportation-related decisions that are made by the professional staff of Transportation and Planning departments in Massachusetts and throughout the United States are, in Newton, made by the Traffic Council. While this approach has important benefits by involving the public in such decisions, it can often slow down the process of making decisions about important transportation projects. As the Council's web page currently notes "Due to the volume of petitions received, there is approximately a 3 to 6 month wait for requests to be heard." The TAC therefore makes two recommendations to streamline the work of Traffic Council: that a review be conducted to see if any decisions currently within the jurisdiction of the Traffic Council should be removed (and transferred to professional staff) and that the Traffic Council increasingly seek to act through the application of generally applicable written policies rather than on a case-by-case basis. The Council itself has begun to implement such a policy-based approach through the adoption of policies such as one on requests for handicap parking spaces and the TAC believes that these efforts should be expanded and institutionalized. In addition, the TAC believes that the current appeals process – under which a single member of the Board of Alderman can appeal a decision of the Traffic Council to the full Board of Alderman – is time-consuming and works against the goal of greater policy-based decision making and therefore recommends changes to limit the number of appeals.

### **Action Required:**

An ordinance change is required to change the appeals process and make any changes in jurisdiction identified in the recommended review of Traffic Council jurisdiction. The Traffic Council already has the authority to develop and adopt written policies to guide its decision making.

### **Recommended Timeline:**

The review of Traffic Council jurisdiction should be completed by June 2012 so that any recommended changes, along with the TAC's recommended changes to the appeals process, can be docketed as an ordinance change in July 2012.

**Staffing or Other Resources needed:**

Unknown amount of staff time

**Cost implications:**

None

## **Subcommittee/Topic: Governance/Transportation Advisory Group**

### **Recommendation:**

The Mayor should create a Transportation Advisory Group as an advisory body to the Mayor's Office. While the TAC believes that the City of Newton would benefit from the establishment of such a Group, at a minimum a Transportation Advisory Group is needed for the next two to three years to advise the executive departments on the implementation of this TAC's recommendations.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

The work of this Transportation Advisory Committee has demonstrated the breadth, complexity and importance of transportation issues facing the City of Newton. Even as the work of the TAC is completed, there remains much to be done to implement our many recommendations. The TAC believes that the work of implementation should continue to be informed by citizen input and therefore recommends (consistent with prior recommendations by the League of Women Voters and others) that the Mayor create a Transportation Advisory Group. While this body would be advisory in nature, it would help ensure broad-based citizen input into the ongoing process of setting transportation policy and making decisions on transportation projects in Newton. Because of the cross-departmental nature of transportation issues, the TAC recommends that this Group be advisory to the Mayor (rather than the Planning and Development department), at least until such time as a Transportation Department is created (see related recommendation).

### **Action Required:**

If possible, the Mayor should issue an Executive Order creating a Transportation Advisory Group (rather than docketing an ordinance to create such a group).

### **Recommended Timeline:**

The new TAG should be created and functioning by January 2012 so that it can begin working with the Transportation Team and department staff to begin implementation of these TAC recommendations as soon as possible.

### **Staffing or Other Resources needed:**

Existing staff would support the new TAG, as they have supported this TAC.

### **Cost implications:**

None other than continued staffing

## **Subcommittee/Topic : Governance/Transportation Department**

### **Recommendation:**

The City of Newton should continue and enhance coordination across the many executive departments responsible for different aspects of transportation, building on the relatively new “Transportation Team” and newly-created Transportation Division in the Department of Public Works and ensuring that each has clear mandates, roles and responsibilities. Ultimately, to fully implement the TAC’s proposed goals and recommendations, the City of Newton should create a Transportation Department which would work in close coordination with an enhanced transportation group within the Planning and Development Department.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

The Mayor’s charge to the TAC included a request that our recommendations address “how the city can better organize and coordinate its transportation decision making across departments.” Currently transportation functions are spread across a wide range of city departments including Engineering, Planning and Development, Police, Public Works, Schools, Senior Services (which includes the Senior Transportation system) and Treasury (which includes the Parking Department). The TAC supports two policy initiatives recently undertaken by the Mayor to promote more cross-department coordination on transportation issues. First, since November, a “Transportation Team” has been meeting weekly, bringing together representatives from many of the traffic/transportation entities in the City (Public Works, Planning, Engineering, Police) to address common issues and streamline the process of planning, design, construction, and enforcement of transportation infrastructure and/or policy. In addition, the Mayor’s budget for fiscal year 2012 creates a Transportation Division within the Department of Public Works.

The Mayor should continue to maximize coordination both within DPW through the new Transportation Division and across departments with the Transportation Team. These entities should play an increasingly more prominent and public role in addressing transportation issues, applying the goals and developing the policies recommended by the TAC. The Transportation Team should be expanded to include at least periodic participation by the school department, senior services and the parking department.

Ultimately, however, Newton needs a department with jurisdiction over all issues relating to transportation, including traffic and parking, which would require consolidating the parking department currently in Treasury and the various transportation-related pieces of Public Works and Engineering. Transportation planning responsibilities could, however, continue to remain within Planning and Development, which would benefit from the creation of an intra-departmental transportation coordination group so that the transportation planner (or planners, in the future) coordinate more closely with others in the department with transportation-related responsibilities (e.g. in permitting, zoning and land use contexts) as well as to coordinate with the Transportation Team and ultimately Transportation Department. The creation of a Transportation Department responsible for all aspects of transportation, traffic and parking other than planning and development would parallel the structure used successfully in other Massachusetts cities, such as Cambridge (which has a Traffic, Parking and Transportation Department as well as an

Environmental and Transportation Division within the Department of Community Development) and Somerville.

**Action Required:**

An ordinance change would be required to create a Transportation Department. Until then, the executive should continue to support and enhance the Transportation Team as well as to provide for better staff coordination on transportation issues within both the Department of Public Works (e.g. the new Transportation Division) and Planning and Development (e.g. between the transportation planner position and the many other staff with at least some transportation-related responsibilities).

**Recommended Timeline:**

Docket an ordinance to create a Transportation Department as soon as possible in order to implement the new departmental structure in the fiscal year 2013 budget.

**Staffing or Other Resources needed:**

While this recommendation could be implemented by moving existing staff to the new Transportation Department, additional staff positions (when budgetary constraints allow) would enhance the ability of both the Transportation Department and the transportation group within Planning and Development to carry out the many recommendations of the TAC.

**Cost implications:**

Dependent on whether new staffing is provided.



## **Subcommittee/Topic: Outreach and Engagement Subcommittee/“Street Smart” Newton Safety Campaign**

### **Recommendation:**

The Outreach and Engagement Subcommittee is recommending a citywide safety campaign to be endorsed by the Mayor and his office. This is not a change of policy, but a public relations initiative in response to the fatalities and accidents in Newton from the previous year.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

This campaign is to deepen the awareness created in the City in response to the fatalities and accidents in Newton in 2009 and 2010. The campaign is designed to assist citizens of Newton to be a resource for all ages on how to operate a motor vehicle, ride bicycles and pedestrian safety. Other cities in the US have launched safety campaigns to provide the public resources, announcements and messages from City officials regarding safety. Our subcommittee designed a website that is virtually maintenance free for this campaign, and is currently being hosted by NNHS. This website can be utilized as a online portal for other TAC subcommittees, the school system and other organizations in the City to provide transportation related information.

The first step to a safety campaign is branding. We recommend “Street Smart” as a universal brand for Newton’s safety campaign. Our recommendation is to make this brand very usable and recognizable throughout the city.

The first phase of the campaign will be introduced via the City of Newton’s existing website as a link. The second phase of the campaign can be introduced via print. A budget is needed for this. The cost of print is dependent of what scale the City wants this campaign to be. Scalability can be managed to different modes of advertising, and this will depend on strategy.

### **Action Required:**

- We recommend that the Mayor approve the website launch
- City takes over hosting the website from NNSH
- The homepage offers the Mayor an opportunity to issue a statement that is posted on the homepage
- The Mayor assigns a staff member to manage content if needed. If edit is required, this person will involve IT to make edits on the website
- The Mayor issues a press release regarding the campaign or hold a press release to launch the campaign
- If funding is available, a print campaign can be created, posted and made available to senior centers, public buildings, places of worship, schools and local businesses.

**Recommended Timeline:**

- Website completed October, 2011
- Launch the website publicly November, 2011

**Staffing or Other Resources needed:**

- The website is designed and virtually maintenance free for at least two years. If desired the City can assign an existing IT resource to manage the site.

**Cost implications:**

- Students at NNHS spent this semester working with our subcommittee in designing this website free of charge.
- If a print campaign is decided, NSHS has volunteered their time.

**Executive Summary for Proposed Recommendation:**

Our subcommittee strongly recommends that the TAC fully support this campaign. This will provide the City of Newton and its citizens a great resource of information that is useful to day-to-day life. It can prevent future accidents and, most of all, save lives.

## **Subcommittee: Safety Subcommittee (Submitted to Mayor Setti D. Warren on September 27, 2010)**

### **Overall Recommendation and Goal:**

The recent spate of transportation-related fatalities in Newton is unacceptable in a city that values the life and well-being of every resident and visitor. Too many Newton residents, especially pedestrians and cyclists, feel that the city's streets (including crosswalks and intersections) are not safe and this lack of safety limits our transportation options. The Newton Transportation Advisory Committee believes that making travel safer in Newton requires widespread changes to create a culture of "safety first" where everyone (including children and seniors, bicyclists and pedestrians) feels safe and safe travel behavior is practiced by motorists, motorcycle and scooter riders, bicyclists and pedestrians alike. The TAC therefore recommends that you immediately launch a comprehensive effort to make Newton safe for all travelers, with a specific goal of eliminating transportation-related fatalities in the city in 2011.

Creating a culture and practice of travel safety in Newton will require a combination of:

- **New policies** to support transportation safety;
- **Infrastructure** that promotes safety;
- **Education and outreach** to Newton residents about safe travel behavior; and
- **Enforcement** of existing laws and ordinances designed to ensure safety.

The recommendations that follow are accordingly organized into these four categories.

These recommendations were initially developed by the Safety Subcommittee of the TAC in a series of four meetings held since the group was convened in July and adopted by consensus at the September 20 meeting of the TAC. They represent a wide-ranging but preliminary set of recommendations in response to your request for an initial set of safety-related recommendations by September 30. The TAC will continue to focus on safety as a critical issue as it develops its broader recommendations and to solicit additional safety-related ideas from the public through the ongoing TAC public outreach and engagement process.

We ask that you provide the TAC with feedback as to which of these recommendations you will accept, which require items to be docketed with the Board of Aldermen and which will not be implemented. If there are recommendations requiring clarification, we ask that you send them back to the TAC for clarification, more specific recommendations or further study.

We emphasize that this represents only a first round of recommendations and that we will be providing you with many additional recommendations, including additional recommendations on topics such as governance and Complete Streets that are included in this set of recommendations.

## **Recommended New Policies and Programs:**

The City should adopt proactive policies to support transportation safety, rather than simply reacting to individual incidents and citizen requests, organize the work of its departments to ensure both internal coordination and excellent communication with the public on issues of transportation safety and enhance the collection and analysis of safety-related data.

### **Policies**

Even before the TAC provides more complete recommendations on the specifics of a “Complete Streets” design principles and processes to ensure that all streets are designed and maintained so as to accommodate all users of all ages and abilities, the City should prioritize the implementation of the following policy changes:

- A policy on roadway markings (a “painting policy”) that specifies policies regarding the use of roadway marking (striped shoulders, crosswalks, etc.) to maximize safety by separating pedestrians and cyclists from moving traffic; this policy should be applied to all repaving and maintenance projects beginning this fall.
- In order to ensure that pedestrians have year-round access to all sidewalks and crosswalks, the Mayor should work with the Alderman and civic groups to expedite the introduction and passage of a sidewalk snow clearance ordinance that would take effect this winter.
- A policy directive to ensure that all city employees serve as models of safe driving/travel behavior.

### **Governance**

- The City should create a user-friendly, transparent process for citizen complaints on transportation-safety related issues that provides the complainant with feedback on the resolution of the complaint.
- Pending further recommendations from the TAC on issues of governance, the Mayor should immediately designate a Bicycle and Pedestrian Coordinator to address all the pedestrian and bicycle issues, including safety issues, across all city departments. The coordinator should overs internal coordinator across all city departments to expedite consideration and implementation of all bicycle and pedestrian-related issues, particularly those relating to safety.

### **Data Collection**

- The City should adopt new procedures for the collection of information about all traffic incidents to which public safety personnel respond, including those involving cyclists and pedestrians in addition to motorists.
- The City should create a web-based system to allow reporting of information by the public regarding safety-related incidents in which no public safety personnel are involved.
- All of this information should be available to the public and data about specific incidents as well as the entire body of information should be analyzed by staff across all relevant city

departments and used proactively to inform public outreach efforts, policymaking and the establishment of priorities for infrastructure spending.

## **Infrastructure for Safe Travel:**

The design and operation of streets, sidewalks, crosswalks and signs can enhance travel safety and even before the TAC provides more complete recommendations on the specifics of “Complete Streets” design principles and processes, the City should immediately begin to implement Complete Streets design principles in order to ensure that Newton’s streets are safer and accommodate the needs of all users.

- The City should implement a “fix it first” approach to infrastructure improvements, prioritizing safety-related work both when undertaking maintenance (e.g. repainting crosswalks) and in establishing capital priorities.
- The City should, this fall, implement a series of pilot projects designed to separate bikes from moving traffic; a working group should continue to work toward consensus on pilot projects for six stretches of roadway that have been under discussion for some time (Langley between Centre and Beacon, Beacon Street between Walnut and Beethoven, Chestnut Street between Beacon and Commonwealth, Hammond St. south of Beacon, College between Beacon and Commonwealth, Hammond St. between Commonwealth and Beacon)
- Because traffic lights are a crucial piece of safety infrastructure, the City should prioritize safety (over congestion relief/traffic flow) in implementing the just-launched effort to retime traffic lights across the City.
- The City should create an online project tracking system for all repaving, maintenance and roadway reconstruction projects, as well as establishing a public process to be consistent with “Complete Street” design principles to ensure early and effective public input into the design of all such projects.
- The City should create a program that allows and encourages small businesses and residences to “adopt” sidewalks and crosswalks in order to ensure that they are properly maintained year-round.

## **Education and Outreach:**

The City should launch a comprehensive outreach and education effort to promote both an overall citywide culture of “safety first” where everyone (including children and seniors, bicyclists and

pedestrians) feels safe, as well as specific safe travel practices and behaviors by motorists, motorcycle and scooter riders, bicyclists and pedestrians alike. The need for this campaign is urgent and it should be undertaken immediately in order to capitalize on growing awareness of the importance of transportation safety.

- The City should ensure that, this fall, every student in grades K-12 receives a minimum of one hour of in-school, grade-appropriate pedestrian/bicycle/driving safety education as a “down payment” on establishing a comprehensive program of in-school safety education.
- The Mayor should work with the Superintendent and the School Department to develop a set of developmentally-appropriate goals for student travel that focuses on getting to and from school as safely and independently as possible in as few cars as possible; the School Department and each school should then review all existing policies on drop-off/pick-up, walking and biking to school, student parking and all transportation-related subsidies and costs to conform to this policy.
- The City should create and implement an outreach and education campaign about the new Safe Driving Law which becomes effective in Massachusetts on September 30 and bans text-messaging for all Massachusetts drivers and prohibits junior operators from using cell phones, with particular attention to educating teens about new texting/cell phone restrictions.
- The City should create and implement a citywide outreach and education campaign designed to promote a citywide culture of “safety first” and should seek state and philanthropic resources to support implementation of such a campaign.
- The City should continue and expand the “Safe Routes to School” program, including reinstating a citywide coordination function.
- The City should create a working group to develop changes to the driver’s education curriculum designed to promote safe driving, including safe driving near bicyclists and pedestrians.
- The City should regularly deploy its “speed boards” to help educate and slow-down motorists in priority locations.
- The Mayor should convene members of the Board of Alderman, city employees and members of the public at a “Safety Summit” to kick off the citywide “safety first” effort and to develop additional ideas and strategies for eliminating transportation-related fatalities in Newton in 2011.

## **Enforcement:**

The City should enhance and intensify enforcement of traffic and parking laws and ordinances as one component of a broader effort to promote safe travel behavior in Newton.

- The City should institute a program of targeted, high visibility enforcement efforts in specific locations around the city focusing on moving violations most likely to create unsafe conditions (e.g. running red lights, blocking the box and not stopping for pedestrians at crosswalks) and most likely to be reduced by enforcement efforts.
- The City should prioritize parking enforcement that addresses safety issues (e.g. parked cars that block line of sight or curb cuts or crosswalks).
- The City should work with the Police Department, School Department, other city departments and interested organizations and members of the public to develop an enforcement strategy for the new Safe Driving Law which becomes effective in Massachusetts on September 30 and bans text-messaging for all Massachusetts drivers and prohibits junior operators from using cell phones.
- The City should issue a training memorandum to police officers that clarifies “reasonable and prudent” expectation for driver behavior and bicyclist safe operation, in order to inform their enforcement of traffic laws and ordinances.

## **Subcommittee/Topic: Safety Summits**

### **Recommendation:**

The Mayor should hold regular safety forums to highlight the accomplishments, challenges and educational opportunities around safety.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

It is important to emphasize safety at all times and to make safety a recurring message. Safety Forums have been shown to improve communication between officials and citizens and to promote meaningful behavior change in cities where they have been held, including Boston. Citizens should be encouraged to share personal experiences and to interact with city staff, including the Police Department representatives. We especially want young people to share their experiences on the road.

### **Action Required:**

The Mayor should direct his staff to plan and participate in regular Safety Forums.

### **Recommended Timeline:**

This should occur in the fall and spring of each school year. It is important to emphasize safety at all times and to make safety a recurring message.

### **Staffing or Other Resources needed:**

Representatives from the Newton Police Department, Engineering, Planning, elected officials (members of the Board of Aldermen and especially Public Safety Committee), the Mayor and representatives from the Mayor's office.

### **Cost implications:**

None



## **Subcommittee/Topic: Planning and Complete Streets - Bicycle Accommodations**

### **Recommendation:**

The City of Newton will develop and implement a Bicycle Master Plan.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Newton's Comprehensive Plan recognizes that bicycle travel constitutes a valuable component for providing mobility and access throughout the city. Lack of a bicycle plan has been pointed out as a reason that Newton lags behind some other cities in terms of providing safe, comfortable, and useful bicycle accommodations. The Transportation Advisory Committee has an opportunity to change this.

### **Action Required:**

- 1) That the city completes a planning process by April 30, 2012 that results in a Bicycle Master Plan for Newton.
- 2) That the city will develop new bicycle accommodations on Newton's roads, at least 20 miles in the next 5 years, based on the recommendations of the Bicycle Master Plan.
- 3) That the city allocates at least 5% of its Chapter 90 transportation budget annually to implement the Bicycle Master Plan and other bicycle-friendly improvements.
- 4) That the city appoints a Bicycle Coordinator, whose job it will be to implement the Bicycle Master Plan.

### **Recommended Timeline:**

At least 3 miles of bicycle lanes or other specific roadway accommodations to be implemented in 2011 and at least 20 miles of bicycle lanes or other specific roadway accommodations to be implemented by 2015.

Allocation of 5% of Chapter 90 budget for bicycle enhancements to be presented by Mayor with next budget cycle, effective no later than October 1, 2012.

Bicycle Master Plan adopted after public process, no later than April 30, 2012.

Bicycle Coordinator appointed by city no later than December 1, 2011.

### **Staffing or Other Resources needed:**

Establishment of "transportation website" on City webpage explaining city's bicycle plan and policies.

Significant allocation of time and effort of city planning staff to conduct meetings and to coordinate public process for developing Newton's Master Bicycle Plan.

Significant allocation of time and effort by Department of Public Works staff in implementing Bicycle Plan.

**Cost implications:**

Annual reallocation of 5% of Chapter 90 budget per year, or about \$100,000 per year to implementing Bicycle Plan recommendations.

No additional costs: Bicycle Plan recommendations are a revenue neutral proposal.

Bicycle coordinator may be paid or volunteer position, depending on budget.

**Executive Summary for Recommendation:**

Improving bicycle access in Newton will increase safety and utilization of this mode of travel and may bring economic benefits. Although there have been a number of efforts to create a uniform bicycle plan in Newton, there is currently no officially sanctioned plan. This proposal will lead to the development, adoption, and implementation of a Bicycle Plan in Newton that will shape policy for a rational approach to improving access by bicycling in our city.

## **Subcommittee/Topic: Planning and Complete Streets – Complete Streets**

### **Recommendation:**

Newton will implement a Complete Streets policy and utilize Context Sensitive Design for its roadways.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

The intent of Complete Streets begins with a premise that all people, not just car users, must be taken into consideration of street design. Therefore, the system must be appropriately concerned with accommodating all types of users and creating a desirable balance. Context sensitive design considers adjacent land uses and community intent in the design of roadways.

### **Action Required:**

- 1) That the Mayor adopts a Complete Streets policy, one that equitably considers the needs of multiple modes of travel (car, transit, bicycle, and pedestrian).
- 2) That the city follows a public participation process in the initiation, review, approval, and implementation of certain roadway projects.
- 3) That the city utilizes Context Sensitive Design in its roadway planning process such that roadway design is consistent and adaptable to community values.
- 4) That the city implements Complete Streets and Context Sensitive Design policies based on flexible approaches to existing roadway engineering standards. Examples include setting maximum 25 mph design speeds, allowing narrow lane widths, considering level of service of intersections based on pedestrian needs, and others.

### **Recommended Timeline:**

Adoption by Mayor by Executive order as city-wide policy by January 1, 2012

Complete Streets policy and process methods implemented by Planning and Public Works departments by March 1, 2012.

### **Staffing or Other Resources needed:**

Establishment of “transportation website” on City webpage explaining Complete Streets policy

Significant allocation of time and effort of city planning and public works department staff to follow public process requirements of implementing policy

**Cost implications:**

No immediate costs, but as projects move forward there may be costs associated with street improvements that are not typically paid for by state or federal funding

Examples include: undergrounding of utilities, street furniture, traffic calming efforts, etc.

**Executive Summary for Recommendation:**

Roadway projects must serve to improve and not degrade access for all users whenever possible, including auto drivers, pedestrians, bicyclists, and transit users. The Comprehensive Plan calls for the design of our roadways to avoid, to the extent feasible, the inducement of more auto traffic passing over Newton's local streets. As such, implementing a Complete Streets policy and using Context Sensitive Design for our roadways will fulfill the goals of maintaining excellent transportation resources for our city.

## **Subcommittee/Topic: Planning and Complete Streets – Design Classification**

### **Recommendation:**

Newton will develop and implement a new Design Classification system for its roadways.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Updating the design classification system of roadways, along with corollary guidance on street design characteristics, will allow for more predictability in evaluating whether proposals for streetscape changes are consistent with the City's intentions for the design and character of its roadways.

### **Action Required:**

- 1) Revise the Design Classification system currently in the Comprehensive Plan to include existing design types not incorporated into the prior classification: highways, arterials, private roads, alleys, and paths.
- 2) Categorize arterial roads in Newton as either "Regional Routes" or "Urban Major Streets" and define these categories.
- 3) Expand the concept of "Village Center Roads" by expanding the utilization of this design type to certain non-village areas and rename these as having a "Main Streets" design.
- 4) Prioritize design under the new Design Classification System to follow the concepts of Complete Streets and also make design decisions contingent upon following the tenets of Context Sensitive Design, so that roadway segments are of a type and scale that matches the land use and place making intentions of the community.

### **Recommended Timeline:**

Adoption by Mayor by Executive order as city-wide policy by December 1, 2011

Docket of Design Classification amendment to Comprehensive Plan with Board of Aldermen by January 1, 2012

### **Staffing or Other Resources needed:**

Education effort for city staff and departments, followed by community outreach

Establishment of "transportation website" on City webpage explaining policy

Significant allocation of time and effort of city planning and public works department staff to develop design classification maps and plans.

### **Cost implications:**

Internal effort by existing city staff, no additional cost expected. Consultants not necessary

**Executive Summary for Recommendation:**

Newton's Comprehensive Plan describes the existing transportation network in the city based on Functional Classification and Design Type Classification systems. The city's network of roadways faces continued demand from motorists while needing substantial enhancement in its pedestrian, bicycle, and public transport options. Classification can help guide decisions about design and priorities for street reconstruction, maintenance, bicycle use, and pedestrian accommodations.

## **Subcommittee/Topic: Planning and Complete Streets: Transit**

### **Recommendation:**

The Mayor and all city departments will promote regional and local efforts to improve and expand rail and bus capacity and access in Newton.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Newton benefits from having multiple public transit options that provide service to various neighborhoods of the city. However, our public transit system can be improved so that it collectively serves all segments of the city throughout the day and provides increasingly viable alternatives to residents' use of private vehicles.

### **Action Required:**

- 1) Maintenance: Provide strong municipal support to the MBTA's plan to maintain, repair, and upgrade its existing public transit infrastructure, and advocate for certain specific enhancements to the existing infrastructure located within Newton.
- 2) Capacity and Access: Advocate for efforts to improve capacity to existing transit lines. Rationalize parking policies around rail transit stations to improve access, and work to improve pedestrian and bicycle connections. Develop policies to increase transit usage among city residents and municipal employees. Undertake efforts to provide transit access to currently underserved areas of the city.
- 3) Expansion: Identify certain bus and rail routes as projects for feasibility analysis to determine whether the extension of these routes is feasible and cost-effective. Specifically, light rail extension to the Needham Street corridor and upgrades to the commuter rail system should be pursued. Transit-related policies that will lead to increased job growth and economic expansion should be pursued.
- 4) Urban density: Promote transit use as part of the permitting process for businesses and for new growth and development. Require public transit use to be incorporated into proposals for any new development or redevelopment within Newton and institute transit-friendly policies to encourage existing Newton businesses and institutions to adopt them. Support regional policies that promote "infill" projects

### **Recommended Timeline:**

Adoption by Mayor by Executive order as citywide policy by February 1, 2012.

Meetings with relevant state and regional agencies to inform about Newton's transit needs to be conducted by December 1, 2011.

Municipal policies on transit use to be implemented by March 1, 2012.

Zoning amendment regarding transit accessibility to be docketed for Board of Aldermen by March 1, 2012

**Staffing or Other Resources needed:**

Establishment of “transportation website” on City webpage explaining city’s transit policies, plans and intentions.

Significant allocation of time and effort of city planning staff to develop policy positions and to conduct meetings at state and regional levels advocating for Newton’s transit policies.

Feasibility studies for transit extensions will likely require outside consultants.

**Cost implications:**

Feasibility studies may incur a cost that will be determined based on public bid requirements and the extent of the work.

Grants (federal, state, regional) and collaborative efforts with surrounding communities, MAPC, MPO, and MBTA may help share some of these costs.

**Executive Summary for Recommendation:**

It is important that we ensure that the City’s policies, plans, investments, and actions on transportation enhance the quality of life in Newton’s neighborhoods and village centers. The way we shape our transportation resources will be vital in promoting economic development in Newton. As such, it is crucial that we work to develop an overall framework within Newton to address our transit infrastructure. Also, it will be important to advocate for regional and statewide policies and investments that support our vision of Newton’s system of bus and rail transit routes.



## **Subcommittee/Topic: Youth and Senior Travel/Pedestrian Safety Features**

### **Recommendation:**

Improve pedestrian safety features such crosswalks, lights, etc. focusing initially on high volume crossings and crossings frequently used by children, seniors or people with disabilities.

Brief Statement of Underlying Principle or Intent of Recommendation: Make safer for all users especially for our most vulnerable population (children, senior, people with disabilities). Our recommendation supports the Transportation and Mobility Goals of Newton's Comprehensive Plan: "To Enhance and Promote Equity in Mobility" and "To Maintain City Character and Quality of Life".

### **Action Required:**

Determine Design Standards Specific to Areas with Vulnerable Populations (seniors, children and people with disabilities) including crosswalk striping (hatching or solid colors improves visibility for cars and attracts pedestrians to use), roadway markings, road design signage, elevated crosswalks, longer signal lengths and countdown walk signals, traffic islands. These standards would be focused primarily on improving pedestrian safety. (look to MAPC guidelines) *These standards may vary from already established citywide standards.*

Look to other communities for a best practices such as bolt down crosswalk stanchions that are in place year-round in Boston vs. Newton's moveable ones that are only in place April – November.

Review and revise Network Maintenance Schedule for crosswalk striping and other features. Increasing the frequency of repainting, especially on busier streets. Review timing to maximize usefulness of newly painted lines.

Produce Semi-Annual Reports for the Mayor and public on network completion and key pedestrian safety measures.

Support state and national efforts to improve pedestrian safety and mobility.

Charge a City Employee or Commission with the authority to direct actions

### **Recommended Timeline:**

Establish standards by May, 2012. Begin implementation as soon after as possible.

### **Staffing or Other Resources needed:**

Input and agreement from Planning and Development staff on Prioritization Criteria. Staff time to support and/or create bi-annual reports.

**Cost implications:**

Dedicated annual expense for network completion, maintenance, improvements, monitoring and reporting.

## Subcommittee/Topic: Youth and Senior Travel/Pedestrian Walkways

### Recommendation:

Comfortable, convenient, and safe pedestrian walkways throughout the city including a complete network of paved walkways, which are accessible to all users. Ensure walkways are well maintained.

### Brief Statement of Underlying Principle or Intent of Recommendation:

Make walking a viable transportation alternative in all neighborhoods for all users. Improve the safety for all people using the walkways, especially for our most vulnerable population (children, senior, people with disabilities). Our recommendation supports the Transportation and Mobility Goals of Newton's Comprehensive Plan: "To Enhance and Promote Equity in Mobility" and "To Maintain City Character and Quality of Life".

### Action Required:

1. Determine **Prioritization Criteria** to facilitate an equitable, transparent process to complete the sidewalk network, **ensuring the most critical walkways are done first**. Criteria should include (but not limited to): proximity to major destinations, accident statistics, type of street, speed on street. The general public should have the opportunity to give input on the criteria. *This decouples walkways from the current waiting list and road upgrade process.*
2. Designate a **Dedicated Funding Stream** for network completion and a set percentage for on-going maintenance. Consider alternative funding sources such as: enabling residents to pay 100% if they so choose, requiring residents to complete sidewalk gaps prior to property transfer and/or associated with special permits, increase parking meter fees to support sidewalk enhancements.
3. **Incorporate pedestrian mobility planning during zoning review process for housing developments and other special permits**. This should be aimed at ensuring development is maximizing pedestrian mobility.
4. Produce **Semi-Annual Reports** for the Mayor and public on network completion and key pedestrian safety measures.
5. **Support state and national efforts** to improve pedestrian safety and mobility.
6. **Charge a City Employee or Commission** with the authority to direct actions

### Recommended Timeline:

Complete network within 5 years (2016). Network maintenance and improvements would be on-going.

**Staffing or Other Resources needed:**

Input and agreement from Planning and Development staff on Prioritization Criteria. Staff time to support and/or create bi-annual reports.

**Cost implications:**

Dedicated annual expense for network completion, maintenance, improvements, monitoring and reporting.

## **Subcommittee/Topic: Youth and Senior Travel/Reduce Traffic Near Schools**

### **Recommendation:**

Direct the School Department to work with the Planning and Development Department to address the critical traffic and safety issues present during arrival and dismissal periods at schools. The goal is to reduce car traffic overall especially near the schools, reduce gridlock/traffic issues en route to schools, keep children safe during these busier periods and support efforts to increase the number of children walking to school.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Despite efforts to promote walking to school through The Newton Safe Routes to School Task Force, too many children continue to arrive at school by car. This car-centered school transportation has a big impact on the traffic and environmental conditions in Newton. Safe Routes promotes the 3 E's: education; engineering; and enforcement as all being critical. Efforts have been focused primarily on education (and this has been parent driven) and some efforts on enforcement (this is not consistent). The critical engineering piece has been directed at a few schools, but needs broader focus and to be applied to every school.

### **Action Required:**

1. **Adopt hierarchy of how kids should be getting to school and home.** Walking/Biking/Busing are first, being driven should be last resort. Set school-by-school goals and measure against them.
2. **Engage School Department and Newton Police in the education effort,** including disseminating important arrival/dismissal/walking information to students and families. Information will hopefully be taken more seriously.
3. **Identify satellite drop-off areas** at each school to minimize traffic near schools— light blue zones.
4. **Complete a comprehensive review at schools** aimed at calming traffic flow at high volume periods. Start with problem **schools**. **Eventually review all schools**. Should be done at high volume “winter” months.
5. **Deliver “Safety Town” program** for children entering Kindergarten. Can be delivered in preschool programs and as summer fair option.
6. **Incorporate school transportation planning during zoning review process for special permits with significant housing.** This should be aimed at ensuring development that there is a safe, defined way to get to school for any children in this new housing.
7. **Review School Transportation.** Are there opportunities to increase bus ridership through route changes and/or additional buses? At what cost? What is the impact to the city of the increased traffic from parents driving?

8. Be prepared to **adopt stronger snow shoveling ordinance so that walking students can safely walk year round**
9. **Ensure policies are consistent with goals.** For example, it should not be less expensive for a parking permit, than a bus pass.
10. **Create citywide position focused on pedestrian and bike access and safety.** Should oversee Safe Routes to School efforts, safety education for school children, and implementation of TAC recommendations, mobility manager for seniors.

### **Recommended Timeline:**

Identify satellite drop-off areas by May 2012.

Complete review of schools by 2013. Implement all changes by 2014.

Deliver Safety Town program starting in summer 2012. Full-scale launch 2013.

Review School Transportation by October 2012.

### **Staffing or Other Resources needed:**

Utilize Planning Department, Newton Police Safety Officer, new Pedestrian and Bicycle Coordinator resources, Safe Routes to School Representatives from each school and School Principals

### **Cost implications:**

Cost for Satellite drop-off areas is minimal. Cost for comprehensive review depends on engineering recommendations made as part of the review. Safety Town costs could be recouped via user fees or potential grants.

## **Subcommittee/Topic: Youth and Senior Travel/Senior Travel**

### **Recommendation:**

Focus on the specific needs of the elderly population as their transportation modes shift from driver to pedestrian and public transportation and ensure those who want to walk and bike have safe opportunities to do so.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Senior residents face particular challenges. Their abilities to drive are reduced over time with significant reductions coming after 75. Utilizing public transportation options can seem daunting as the T system becomes more sophisticated (Charlie Cards) and route information is primarily online. There are also opportunities to increase the number of older residents biking, keeping them mobile (and healthy) for many additional years.

### **Action Required:**

1. **Create a Safe Driving Law campaign**, focused on Senior Driving. Ensuring seniors know what the new Safe Driving law requires and that others know what they can do to ensure to address seniors that may pose a hazard.
  - If you're 75 years old or older, you must renew your driver's license in person at the Registry of Motor Vehicles.
  - If you're 75 years old or older, you have to take a vision test every five years when you renew your license.
  - A health care provider or police officer who feels an individual cannot mentally or physically operate a motor vehicle safely can request an evaluation of the person's ability to possess a license. Such a request, however, cannot be made solely based on a person's age.
2. **Provide assistance to seniors looking to navigate public transportation**, including route information and Charlie Card information.
3. **Promote a healthy senior lifestyle**. Create more senior friendly walking environment through creation of comfortable, convenient, and safe pedestrian walkways throughout the city (see related recommendation)
4. **Create more senior friendly biking environment** by:
  - Encourage more biking for seniors by offering instructional classes
  - Creating bicycle lanes on streets that are wide enough.
  - Mapping small neighborhood roads with minimal traffic.
  - Ensuring road surfaces are safe and smooth.
  - Placing signage on smaller roads entering major thoroughfares as far forward as possible so that drivers and bicyclists can see one another.
  - Painting signage on roads, such as "Stop Ahead", would warn cyclists looking down at road.

- Traffic lights should have lapsed time signs so that seniors may walk their bikes across complex and busy intersections with pedestrians.
  - Through roads, such as the Commonwealth Avenue carriage road, should be made as safe as possible for seniors, since when properly set up, it gives seniors the opportunity of a place to go where they know they can ride a good distance without being too concerned about automobile traffic.
5. **Create citywide position focused on pedestrian and bike access and safety.** Should oversee Safe Routes to School efforts, safety education for school children, and implementation of TAC recommendations, **mobility manager for seniors.**

### **Recommended Timeline:**

1. Create Safe Driving Campaign by June 2012.
2. Launch pilot program fall 2012.
3. Ongoing.

### **Staffing or Other Resources needed:**

1. Utilize any State DOT material. Input and agreement from Health Department and Mayor's Office. Staff time to support and/or create flyers.
2. Utilize intern to layout and document process. Utilize Planning, DPW and new Pedestrian and Bicycle Coordinator resources.

### **Cost implications:**

Cost of flyers, promotional material



## **Subcommittee/Topic: Parking / Bicycle lane priority where parking demand is low**

### **Recommendation:**

The City of Newton formally adopt a policy that bicycle travel is a higher priority use of the shoulder than parking where space is insufficient for both parking and bike lanes and where the demand for parking is low.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

While sufficiently wide (4-5') striped shoulders provide a meaningful safety improvement for bicyclists, without full bike lane status, they fail to attract many riders of average skill and confidence – exactly the people who we want to encourage. On many city streets that would be good candidates for bike lanes, the biggest obstacle to painting “official” bike lanes is not actual parking need, but regulations that allow parking.

Note: it is not the purpose of this recommendation to suggest that the city instigate a general process of making parking illegal where demand is low. Rather, the recommendation is limited to making a policy statement that will act as a reference in those specific cases where parking demand is low and a conflict arises between bicycle accommodations and parking regulations. This recommendation does not preclude the creation of a bicycle lane by removing parking along an area with moderate or heavy parking usage.

Note also that this recommendation would not change the steps in the public process of reviewing development or regulation proposals.

### **Action Required:**

Adopt by executive order a policy statement on the priority of bicycle accommodations and parking regulations in areas where actual parking demand is low

### **Recommended Timeline:**

- By February 2, 2012, adopt a policy statement on the priority of bicycle accommodations and parking regulations in areas of low parking demand

### **Staffing or Other Resources needed:**

- None

### **Cost implications:**

- None

**Subcommittee/Topic: Parking /****Create comprehensive parking management plan and designate a manager****Recommendation:**

Invest in a parking management plan, to manage both public and private spaces, and designate a parking program manager to implement it.

**Brief Statement of Underlying Principle or Intent of Recommendation:**

Maximize the use of the City's resources, both in governance and in utilization of public and private parking spaces.

**Action Required:**

Creation of new position and/or shifting of responsibilities of existing personnel to focus on parking administration.

**Recommended Timeline:**

Immediate.

**Staffing or Other Resources needed:**

A plan would need to be prepared for the mayor's review. Some features could require Board action, such as addition of a staff position for this purpose.

**Cost implications:**

It is likely that the consolidation of responsibilities and improved management of parking placement, pricing, and oversight will result in efficiencies that will save money and produce additional revenue. Depending on program design, revenues from meters, permits and tickets can fully support this position.

**Executive Summary:**

Parking management responsibilities are currently divided among several individuals and committees for: collections, ticketing, deposits, planning, signage, zoning, parking waivers and meter repairs. Changes to existing parking are reviewed by the Traffic Council on a street-by-street basis, which doesn't always consider a larger parking scheme. Development of a comprehensive approach to managing parking will create order and equitable decision-making and implementation of parking through the City and will reduce traffic and congestion and produce revenues in the process.

## **Subcommittee/Topic: Parking / Implement in-lieu fees**

### **Recommendation:**

Consider parking in-lieu fees whenever parking waivers are requested.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

The Board of Aldermen frequently gives waivers for required parking where parking is unavailable or when the number of parking spaces required for a business cannot be met on-site.

Compensation for such waivers could be used to fund parking elsewhere or other transportation improvements to address long-term needs.

### **Action Required:**

Requires adoption of a new ordinance. Already docketed for review by the Board of Aldermen.

### **Recommended Timeline:**

Review as soon as can be placed on a Board agenda.

### **Staffing or Other Resources needed:**

Staff time required to prepare reports, attend meetings, prepare documents to implement program.

### **Cost implications:**

Has the potential to increase funds for transportation-related improvements to village centers and mixed-use sites.

### **Executive Summary:**

Adoption of an in-lieu fee would provide greater flexibility in meeting parking requirements, particularly where parking is constrained. It will also provide predictability and certainty to developers if the price is fixed. This should be considered as one of many options that could be allowed by right to make it easier for requirements to be met and reduce a barrier to new business development.

## **Subcommittee/Topic: Parking / Parking in structures only if justified**

### **Recommendation:**

Consider use of parking structures only if:

- supply, demand, and pricing studies in the context of a well-functioning parking management plan demonstrate it is the best means available for addressing parking needs, OR
- the investment in a parking structure can be justified in terms of urban design or similar planning goals.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Parking Structures are a compact approach to providing parking that is often suited to urbanized areas and allows for available land that would otherwise be taken up by surface parking, to be put to a better use that would enhance village vitality.

### **Action Required:**

Evaluate existing underutilized parking lots and assess parking supply and demand in village centers to determine need for parking structures.

### **Recommended Timeline:**

As need warrants.

### **Staffing or Other Resources needed:**

Construction of parking structure(s) will require staff to operate and maintain them. Through technological advances, it is possible to minimize demands for staff to operate the structures; however, routine cleaning and maintenance of equipment will be needed.

### **Cost implications:**

The cost of parking in structures can vary from \$20,000 per parking space above grade to \$75,000 or more per space for underground designs. The cost varies depending on the complexity of design and the depth of the structure.

### **Executive Summary:**

Parking in structures is an appropriate use of land, particularly in urban areas. Pricing of parking, not only within a proposed structure but in the immediate vicinity should be considered when

determining whether it will be well used. Parking structures should be self-funded whenever possible, but may be subsidized in order to achieve urban design goals.

## **Subcommittee/Topic: Parking/ Pilot market-based meter pricing**

### **Recommendation:**

Set meter prices according to demand. Start with a pilot in an area with a high level of parking demand.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Meter pricing can be used to more efficiently allocate our limited resources, encouraging those who are willing and able to walk further to do so, helping match supply and demand.

### **Action Required:**

Identify a pilot area, working with the Board of Aldermen. The pilot area should be one of very high demand. Docket an ordinance, for review by Public Safety and Transportation Committee of the Board of Aldermen, establishing the area and the authority for some City representative(s) to monitor parking demand, and to set and publicize parking rates.

### **Recommended Timeline:**

Pilot area could be identified with 10 hours of staff time, depending on Aldermanic interest. Timing for passage of docket item is difficult to estimate.

### **Staffing or Other Resources needed:**

10 hours of staff time (?) to get started + on-going staff time to administer the pilot

### **Cost implications:**

In a high-demand area, meter rates and revenues would be higher than they are now. The surplus should be dedicated to costs to administer the program. It is likely, however, that the additional revenue would not cover all pilot-program costs. On the other hand, increased turnover should result in improved economic activity in the affected area. If the approach is adopted broadly, beyond the pilot, *it should pay for itself*.

## **Subcommittee/Topic: Parking / Pilot a multi-user parking program**

### **Recommendation:**

Ensure residential streets near village centers accommodate all types of users, without overburdening residents. These streets marked with 2-hour or similar parking restrictions would also accommodate all-day parking by residents, local workers, and commuters, through the sale of permits. Start with a pilot program in one neighborhood or village center.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

- Make best use of limited public parking spaces
- Increase equity & consistency in the way we provide and pay for parking
- Ensure that parking management is self-funded

Residential streets near village centers have a patchwork of different parking restrictions designed to prevent them from being overwhelmed by commuters, workers and other long-term parkers. The result is that some on-street parking spaces remain vacant even where parking demand is high, because of poorly designed restrictions. It is possible to accommodate all users with more careful management.

### **Action Required:**

Identify the pilot area. Docket an item for review by the Public Safety & Transportation Committee of the Board of Aldermen establishing the pilot area and the authority for some City representative(s)/staff to administer the program.

### **Recommended Timeline:**

Could start immediately. Pilot area could be identified with 10-20 hours of staff/volunteer time. Docket item preparation & passage time is difficult to estimate. Pilot should last for a year.

### **Staffing or Other Resources needed:**

Will require administration, including creation, marketing and distribution of passes, collection of fees, and enforcement following implementation.

### **Cost implications:**

The steady costs of administering the program would be covered by the sale of permits.

### **Executive Summary:**

In one parking catchment area of the city, accommodate all sorts of users on nearly every street. Mark all unmetered streets with two-hour parking limits (or find another approach to ensure turnover). Offer residents, transit commuters, and village employees the option to purchase permits allowing them to park all day. To accommodate short-term visitors, limit the number of permits so as to leave a large fraction of the street parking available for two-hour parking. Set the commuter/employee permit price to pay for all enforcement and administration, and charge residents very little or nothing for their permits.

## **Subcommittee/topic: Parking / Pilot on-street bicycle parking**

### **Recommendation:**

Promote bicycling by piloting on-street bicycle parking in one existing auto parking spot in a village business district.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Make best use of limited public parking spaces

### **Action Required:**

Identify one specific on-street parking space within one of the Villages and convert it to a bicycle parking corral. Seek support of affected business owner/operator. Install bicycle racks and roadway protection. Docket item for Traffic Council and public consideration.

### **Recommended Timeline:**

Immediate. Action recommended for implementation during Fall 2011 construction season. Once approved could be installed in one day.

### **Staffing or Other Resources needed:**

Minimal staff time. One-day installation.

### **Cost implications:**

Corrals must provide traffic protection for users and bicycle safety and snow plows. This requires minimal material and installation cost of corral boundaries; includes combination of line painting, rolled asphalt curbing and/or stanchion posts. Lost meter revenue could be partly replaced by user donations at meters. Could yield positive tax revenues from increased business activity.

### **Executive Summary:**

A well-sited bicycle corral provides secure convenient bike parking, enhances pedestrian streetscape by removing obstructive bicycles locked to meters, trees and sign poles and increases potential customer activity at local businesses. Bicycle corrals accommodate 12 bicycles at the expense of only a single vehicle space. Bicycle corrals can be part of a larger Complete Street program to enhance Village qualities. Used in conjunction with other bicycle and pedestrian accommodations including bicycle lanes and curb extensions, these reclaimed areas providing safer pedestrian crossing as well as vibrant, roadway buffered space for outdoor seating, planters, and street performers. Additional bicycle corrals may be considered in other villages as warranted.



## **Subcommittee/Topic: Parking / Rationalize parking standards**

### **Recommendation:**

Foster parking standards that take into consideration actual demand, potential for shared parking, and ease of access to alternative modes of transportation. Also, allow the standards to be satisfied by managing parking demand or in lieu fees, which the applicant pays the City to manage parking demand.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Parking requirements should better reflect actual needs, to improve equity and predictability. Parking requirements should be able to be satisfied by means other than constructing parking to improve flexibility and economic efficiency.

### **Action Required:**

Ordinance change. An item combining more accurate and reasonable parking requirements with new options for meeting those requirements has already been docketed for review by the Board of Aldermen.

### **Recommended Timeline:**

Review as soon as can be placed on a Board agenda.

### **Staffing or Other Resources needed:**

Staff time required to prepare reports, attend meetings, prepare documents to implement program

### **Cost implications:**

Has the potential to accelerate private investment and increase the tax base.

### **Executive Summary:**

Current City parking standards are independent of location within the City, which forces businesses where transportation alternatives are available to provide more parking than they need.

Furthermore, the standards are based on data from outside Newton. The standards should fit the context. Also, offering flexibility in meeting the standard, as by having applicants pay in lieu fees to have the City manage parking rather than building parking, allows businesses to leverage existing and potential opportunities for transportation demand management.

## **Subcommittee/Topic: Parking / Reevaluate Community Parking Program**

### **Recommendation:**

Re-evaluate both the community permit program, wherein spots at 12-hour meters are rented on an annual basis, and establish a moratorium during evaluation\*.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

- Make best use of limited public parking spaces
- Increase equity and consistency in the way we provide parking

Reserved spaces are sometimes left empty even while the rest of the lot is full, which is a waste of valuable parking. It also creates resentment and impressions of unfairness and incompetence.

### **Action Required:**

Submit request for review of existing program to Board of Aldermen. Will require collection of data on the turnover and occupancy of existing reserved spaces to compare to that elsewhere in the activity center to determine if spaces are underutilized.

### **Recommended Timeline:**

Should begin immediately. Moratorium could be established informally at the next available meeting of Traffic Council or of the new Transportation Team, and institutionalized through the Board of Aldermen in two months or fewer. Re-evaluation study could be completed with 20-40 hours of staff/volunteer time.

### **Staffing or Other Resources needed:**

Staff or volunteer resources required to conduct review of the program

### **Cost implications:**

Depends on outcome of analysis. A revised program could generate more or less revenue. (See our other recommendation, Multi-user Parking Permit Program, for a self-funding alternative that would leave metered spaces free for shoppers.)

### **Executive Summary:**

Reserving or dedicating parking guarantees that spaces are sometimes unused and, therefore, wasted. Permit programs should ensure that spaces can be used to their fullest potential, by different users at different times and not left empty when those who have reserved them are not using them.

\*Since this recommendation was drafted, the Board of Aldermen voted to end the Community Permit Parking program, rendering our suggested moratorium moot. We have preserved it here to document our concern about the program.

## **Subcommittee/Topic: Parking / Re-evaluate resident-only parking districts**

### **Recommendation:**

Re-evaluate resident-only parking districts and enact a moratorium during evaluation.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

- Make best use of limited public parking resources
- Increase equity & consistency in the way we provide parking

City streets belong to everyone and should be shared in a way that makes the best use of this limited resource while respecting the needs of all affected.

### **Action Required:**

For informal moratorium: transmit guidance to Traffic Council.

For formal moratorium: Change of Ordinance to revise text regarding residential permit programs; must be docketed for review by Public Safety and Transportation Committee of the Board of Aldermen. For re-evaluation: task the Planning & Development Department to design & conduct a study.

### **Recommended Timeline:**

Should begin immediately. Moratorium could be established informally in one month, at the next Traffic Council meeting. It could be institutionalized through the Board of Aldermen in maybe 2-3 months. Re-evaluation study could be completed with 20-40 hours of staff/volunteer time.

### **Staffing or Other Resources needed:**

Staff resources required to conduct short review of the program

### **Cost implications:**

None, except that an alternative approach for managing parking on affected residential streets would have to be adopted. (See our other recommendation, Multi-user Parking Program, for a self-funding alternative.)

### **Executive Summary:**

When streets are restricted to use by residents only, those who might be able to park on the streets when spaces are not in demand cannot do so. However, residential streets in some areas would be and are currently overwhelmed with nonresident parking where no permit program exists. We believe that there are more effective ways to achieve the goals of the current policy.

## **Subcommittee/Topic: Urban Fabric/Master Plan for Transportation**

### **Recommendation:**

Create a Master Plan for Transportation to foster a number of initiatives that will reconnect the City's urban fabric, which is a complex network of transportation routes and modes that relate to land uses throughout the City.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Transportation routes are an integral part of the City's urban fabric and consist of streets, structures, parks and waterways. The strategy of knitting them together with various infrastructure improvements will generally improve access and mobility in and around the City, as well as enhance the travel experiences of visitors and residents alike. Consistent with the City's *Comprehensive Plan*, contemporary Smart Growth policies and TAC recommendations, the Urban Fabric subcommittee's recommendations encourage safe and orderly travel by a variety of modes of transportation that are fairly selected and distributed across the City. In addition, these recommendations contribute to the social, economic, environmental and aesthetic value of the City.

The Complete Streets program, also endorsed by the TAC, encourages roadway designs that facilitate travel for people of all ages and abilities by a variety of modes. Although many of the City's streets are not wide enough to accommodate *all* desired modes of transportation, the City's *Comprehensive Plan* notes that land uses should have a complementary relationship and it is important to assess the optimal relationship between land uses and road widths in designing future roadways.

Some aspects of the development of a Transportation Master Plan may require update of the City's *Comprehensive Plan*, which is a longer-term objective. Specifically, such an effort could include identification of opportunities to reconnect areas that have been severed by the construction of the Massachusetts Turnpike and to examine the potential to better connect each of the City's village centers and commercial corridors, including creating a vision for redesign and reconstruction of Route 9. By creating master plans for such areas, community members and property owners can develop a shared vision for integrated, ongoing development. With appropriate zoning, this holistic approach to weaving land use and transportation connections through a Transportation Master Plan can also help to spur economic development, which further weaves the City's urban fabric. While beyond the scope of the TAC's original mission, such objectives should be considered in the future for an integrated approach to planning for the vitality of the City.

In the near term, the Transportation Master Plan should emphasize the following features:

1. **Locations for Roundabouts.** Criteria should be created to identify viable locations for roundabouts at intersections throughout the City. Such locations should be mapped so as to encourage consideration of this traffic-calming tool when opportunities present themselves, e.g., when streets are reconstructed or when budgeting for signalization of intersections is considered.
2. **Connectivity.** By improving continuous routes for travel throughout the City, travel time and air pollution will be reduced and new relationships between uses will be created. A study should be undertaken to identify opportunities to mend broken connections and/or create new continuous routes, including rail trails, overpasses, and underpasses. Then, the locations should be mapped to identify infrastructure improvements that could be realized over time, such as when properties are redeveloped. Some connections will happen sooner than others, but the plan should not be limited by such timelines.
3. **Face the River Plan.** The Charles River is a natural resource and amenity that has been underutilized for recreation, tourism and transportation. The Transportation Master Plan for should include possible means to connect the river to other forms of transportation including pedestrian and bicycle routes. Again, the relationship between all modes to create multiple opportunities for mobility throughout the City is a key objective. Mapping the connections would likely be followed by installation of the connecting routes over a number of years.
4. **Snow removal.** Consistent with the recommendations of the Youth and Senior Travel Subcommittee, ensuring that our sidewalks and bike lanes are accessible during the winter is a priority (see related recommendation from the Youth and Senior Travel Subcommittee for details). Removal of snow should be considered where relocation fails to ensure clear walkways.
5. **Parking in structures.** While the TAC policies generally urge people to consider a variety of alternatives to vehicular travel, , those who choose to drive must park at their destinations. Parking structures make better use of land than parking lots in our village centers where land is a valuable resource. In addition, providing adequate parking in an accessible location will reduce congestion as motorists are less likely to drive around seeking a parking spot. As noted by the Parking Subcommittee, structures should be considered where demand warrants and where it can be shown that a structure is the best means for accommodating parking in a given situation.
6. **Reconsider Traffic Council structure.** The Mayor and the Directors of Planning, Engineering, and Public Works, along with the Board of Aldermen, should determine a better process to handle appeals to Traffic Council decisions. The details of this recommendation are addressed as one of the overarching Governance recommendations.

## **Recommended Timeline:**

Complete Urban Fabric Master Plan by December 31, 2012

## **Subcommittee/Topic: Urban Fabric/ Outlaw Future cul-de-sacs**

### **Recommendation:**

Outlaw Future cul-de-sacs

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

Cul-de-sacs severely limit pedestrian and especially children's mobility. Children who live within cul-de-sacs must use larger and busier streets to go to schools and shops instead of using safer secondary and tertiary streets. The large thoroughfares connecting cul-de-sacs suffer from traffic jams, high maintenance cost and the constant need of widening as population increases. Firefighters and ambulance drivers don't like cul-de-sacs because they increase the response time to emergencies. Cities like Northampton, MA and Belmont, NC outlawed the cul-de-sacs many years ago and recently the state of Virginia did the same.

### **Action required:**

Petition the Board of Aldermen to amend Newton Zoning Ordinances to prohibit the construction of new cul-de-sacs. Ask the Planning Department and the Information Technology Department to provide educational materials and maps for public hearings.

### **Recommended Timetable:**

The ordinance amendment – 4 months.

### **Staffing and Other Resources needed:**

Planning and Information Technology departments of Newton, community volunteers, civic initiators.

### **Cost Implications:**

The salaries of the above listed departments' staff, the aldermen's stipends and the cost of utilities.

### **Executive summary:**

There are more than 100 cul-de-sacs in Newton. This form of urban fabric is typical for relatively low-density exurbia and suburbia, not for increasingly urbanizing centers like Newton. While providing relative comfort to their residents cul-de-sacs increase traffic load on major urban streets, restrict pedestrian mobility, impede the flow of traffic and increase the cost of maintenance for the city at large. If Newton wants to preserve its parks and conservation areas, the construction of new cul-de-sacs must be prohibited.

## **Subcommittee/Topic: Urban Fabric/ Roundabout Master Plan**

### **Recommendations:**

Create and implement the Roundabout Master Plan of Newton.

### **Brief Statement of Underlying Principle or Intent of Recommendation:**

One of the successful mitigation of traffic load is the installation of roundabouts in the intersection of major transportation routes. Currently, the existing rotaries in the United States and in Europe are being substituted with roundabouts. Unlike rotaries, roundabouts have smaller diameters and force drivers to slow down to 15-20 miles per hour which in turn reduces vehicular accidents and provides better safety for pedestrians and cyclists. Also, roundabouts can remove traffic signals, decrease environmental pollution and create aesthetically valuable intersections.

### **Action Required:**

Design and install roundabouts at the intersections of Newton's major urban streets. We recommend to start with Newton Centre because two roundabouts were already proposed and designed by traffic engineers at the intersections of Beacon/Centre and Beacon/Langley streets. Three other roundabouts were proposed by the developers of Riverside Station project at the intersection of Grove Street and Route 128. Also, several roundabouts were proposed for a Needham Street reconstruction. These piecemeal proposals should be included in the proactive Roundabout Master Plan for the entire City of Newton.

### **Recommended Timetable:**

The Master Plan – 1 year, the installation of Riverside and Needham Street roundabouts – 2 years, Newton Centre and other roundabouts – 3 to 5 years.

### **Staffing and Other Resources needed:**

Planning, Engineering, Information Technology departments of Newton, community volunteers, civic initiators and the teams of engineers, architects and developers.

### **Cost Implications:**

The salaries of the above listed departments' staff, fees for consulting specialists. The cost of construction materials and labor should be determined by the prevailing wage law and the market fluctuations. Business plans should determine the feasibility of every roundabout. The sources of financing should be sought from the state and federal grants.

**Executive summary:**

Many community members still don't understand the difference between rotaries and roundabouts. This was especially evident during the community meetings for the Riverside Station development. Therefore, we recommend that the City of Newton provide educational sessions within the available media sources and community meetings.



**Subcommittee/Topic: None/ Increase Car-Share Opportunities**

Provide additional car share locations in Newton

**Brief Statement of Underlying Principle or Intent of Recommendation:**

One objective of the Newton Comprehensive Plan is to strengthen alternative forms of transportation. Car sharing can help the City accomplish these goals by offering residents and employees an opportunity to reduce ownership and operation of automobiles by offering them the ability to use a car only when needed. Shared-car resources mean fewer cars on the road, which offers many benefits including less congestion, less pollution, less dependence on oil, and improved air quality.

**Action Required:**

Staff and elected officials will identify specific locations in City lots, or in private lots, and coordinate placement of shared cars. Items will be docketed for action by Traffic Council or other committees, if needed.

**Recommended Timeline:**

Winter 2011/2012 and beyond.

**Staffing or Other Resources needed:**

Use existing staff resources

**Cost implications:**

Shared cars likely to be available at no cost to the City. If parking meters are to be removed, the City will likely request payment to compensate for lost parking meter revenue. Lost revenue may result from a reduction in excise tax if residents reduce the number of automobiles in their household.

**Executive Summary:**

Newton currently has two Zipcars permanently stationed at the Woodland MBTA parking garage and two more at the Riverside MBTA parking lot. The City recently signed a contract to add two Zipcars in the Langley ("Triangle") parking lot in Newton Centre for a one-year trial period. Over the year, a process that would review and expand the program will be developed.

## **APPENDIX**

On the following pages are a presentation on Complete Streets and Planning, as well as some additional Urban Fabric recommendations. While not all of these ideas found their way into the final recommendations or were agreed upon by all members of the group, they are included here for informational purposes, as they represent a significant body of research that provided food for thought and healthy discussions about transportation, in general, that may inform future work.

# DRAFT



## TRANSPORTATION ADVISORY COMMITTEE

### City of Newton, Massachusetts

Setti D. Warren, Mayor

(617) 796-1100

Stephanie Pollack, Committee Chair

(617) 448-9406

### Subcommittee Co-Chairs

Jim Danila

(617) 796-1022

David Koses

(617) 796-1033

Srdjan S. Nedeljkovic

(617) 332-1721

Sean Roche

(617) 792-8998

## DRAFT TRANSPORTATION PLAN AMENDMENT

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March 16, 2011

The Transportation Advisory Committee was formed in order to undertake a wide-ranging review of transportation issues in Newton. Consistent with the intentions of Newton's Comprehensive Plan and the recent work of the Mixed Use Task Force, the Planning and Complete Streets subcommittee has addressed the following issues as they relate to transportation:

- Roadways: creating a new design classification system
- Public transit: recommendations to improve rail and bus connections in Newton
- Bicycles: developing a bicycle accommodation plan
- Complete streets and context sensitive design: a new approach for our roadways

The proposals presented in this Transportation Plan Amendment are intended to shape policy for a rational approach to our roads and auto travel, as well as to improve access by walking, bicycling, and public transportation.

It is important that we ensure that the City's policies, plans, investments, and actions on transportation enhance the quality of life in Newton's neighborhoods and village centers. The way we shape our transportation resources will be vital in promoting economic development in Newton. As such, it is crucial that we work to develop an overall framework within Newton to address our transportation infrastructure. Also, it will be important to advocate for regional and statewide policies and investments that support our vision of Newton's system of roads, rails, and other routes.

### Executive Summary

#### *Design Classification of Newton's roadways: Recommendations*

Newton's Comprehensive Plan describes the existing transportation network in the city based on Functional Classification and Design Type Classification systems. Classification can help guide decisions about design and priorities for street reconstruction, maintenance, transit use, and pedestrian accommodations. The city's network of roadways faces continued demand from motorists while needing substantial enhancement in its pedestrian, bicycle, and public transport options. Updating the design classification system of roadways, along with corollary guidance on street design

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characteristics, will allow for more predictability in evaluating whether proposals for streetscape changes are consistent with the City's intentions for the design and character of its roadways. This memorandum presents four major recommendations:

- 1) Revise the Design Classification system currently in the Comprehensive Plan to include existing design types not incorporated into the prior classification: highways, arterials, private roads, alleys, and paths.
- 2) Categorize arterial roads in Newton as either "Regional Routes" or "Urban Major Streets" and define these categories.
- 3) Expand the concept of "Village Center Roads" by expanding the utilization of this design type to certain non-village areas and rename these as having a "Main Streets" design.
- 4) Prioritize design under the new Design Classification System to follow the concepts of Complete Streets and also make design decisions contingent upon following the tenets of Context Sensitive Design, so that roadway segments are of a type and scale that matches the land use and place making design intentions of the community.

### *Complete Streets and Context Sensitive Design: Recommendations*

In developing a policy for improving access and mobility in Newton, it is recommended that the City pursue a Complete Streets approach and to implement projects so that they reflect a Context Sensitive Design approach. The Comprehensive Plan calls for the design of our roadways to avoid, to the extent feasible, the inducement of more auto traffic passing over Newton's local streets. Roadway projects must serve to improve and not degrade access for all users whenever possible, including auto drivers, pedestrians, bicyclists, and transit users. As such, developing design considerations will provide guidance to fulfill the goals of maintaining excellent transportation resources for our city. This memorandum presents four major recommendations:

- 1) That the city adopts a Complete Streets policy, equitably considering the needs of multiple modes of travel (car, transit, bicycle, pedestrian), and as further defined in this document.
- 2) That the city follows a public participation process in the initiation, review, approval, and implementation of certain roadway projects.

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- 3) That the city utilizes Context Sensitive Design in its roadway planning process, such that roadway design is consistent and adaptable to community values, and as further defined in this document.
- 4) That the city implements Complete Streets and Context Sensitive Design policies based on flexible approaches to priorities, such as acceptable design speeds, lane widths, level of service goals, bicycle facilities, and others.

### *Transit Improvement Recommendations*

Newton benefits from having multiple public transit options which provide service to various neighborhoods of the city. However, each of these options can be improved so that they collectively serve all segments of the city throughout the day, and provide viable options to residents' use of private vehicles. This memorandum presents four major recommendations to enhance the existing public transportation system and to explore the feasibility of new capital improvements for transit in our city:

- 1) Provide strong municipal support to the MBTA's plan to maintain, repair, and upgrade its existing public transit infrastructure, and advocate for certain specific enhancements to the existing infrastructure located within Newton.
- 2) Identify certain existing bus and public transit routes as projects for feasibility analysis to determine whether the extension of these routes is feasible and cost-effective. Specifically, light rail extension to the Needham Street corridor and upgrades to the commuter rail system should be pursued.
- 3) Incorporate public transit friendly policies at the municipal level to encourage widespread public transit use among city employees, school department employees, and public school students.
- 4) Promote transit use as part of the permitting process for businesses and for new growth and development. Require public transit use to be incorporated into proposals for any new development or redevelopment within Newton and institute transit-friendly policies to encourage existing Newton businesses and institutions to adopt them.

### *Bicycle Accommodations Recommendations*

Newton's Comprehensive Plan recognizes that bicycle travel constitutes a valuable component for providing mobility and access throughout the city. Many cities now have plans for bicycle accommodations, and improved bicycle accommodations may bring

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economic benefits. Although there have been a number of efforts to create a uniform bicycle plan in Newton, there is currently no officially sanctioned plan. Lack of a bicycle plan has been pointed out as a reason that Newton lags behind some other cities in terms of providing safe, comfortable, and useful bicycle accommodations. The Transportation Advisory Committee has an opportunity to change this. This memorandum presents four major recommendations:

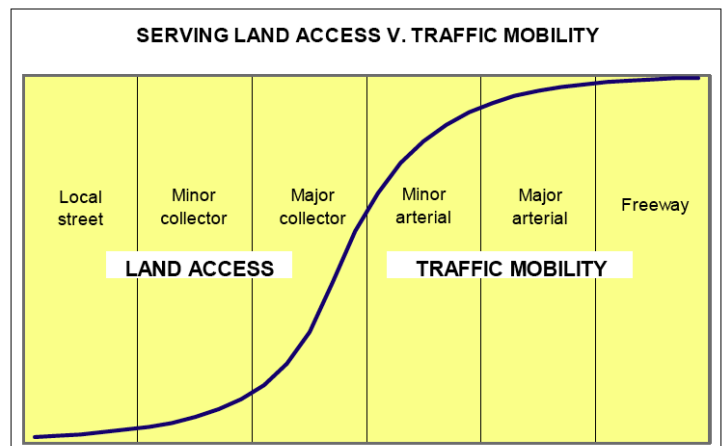
- 1) That the city will develop new bicycle lanes on Newton's roads, at least 10 miles per year for the next 5 years, based on the recommendations of the Bicycle Master Plan.
- 2) That the city allocates at least 5% of its Chapter 90 transportation budget annually to implement the Bicycle Master Plan and other bicycle-friendly improvements.
- 3) That the city completes a planning process by December 2011 that results in a Bicycle Master Plan for Newton, a draft of which is appended to this document.
- 4) That the city appoints a Bicycle Coordinator, whose job it will be to implement the Bicycle Master Plan and other policies and actions recommended in this memo.

The remainder of this memorandum will discuss the recommendations of these four major areas of transportation policy in greater detail.

## Design Classification of Newton's Roadways

### *Introduction*

The traditional classification of roadways has been based on the relationship between mobility and access for cars. Functional classification describes the way a roadway provides for travel mobility and how it provides access to adjacent land uses. There are different categories assigned for rural and urban roads. In Newton, only urban roadway classifications apply. Generally, the mobility of a roadway relates to the travel speeds of motor vehicle traffic that uses the road. Land access refers to the number and frequency of intersections and driveways. Under this system, limited access highways fall into the highest category of roadway, as under ideal conditions they are able to accommodate large volumes of traffic going at high speeds. Major arterials



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are intended to provide for relatively high capacity of traffic at moderate speeds, followed by minor arterials, collector roads, and then local streets. At the local street level, the emphasis is on access to adjacent land uses, as these streets are not intended for long-distance travel, and traffic volumes and speeds are projected to be low.

The major shortcoming of the functional roadway classification system is that it does not consider roadways as places for mobility by users other than car drivers. It does not consider roadways in the urban context and as a component of a “sense of place.” It does not consider safety for pedestrians and bicyclists. And a standard roadway functional classification system does not address how the character of a roadway may influence the design of buildings and properties around it. There is no method for the functional type of roadway hierarchy to define how a roadway shapes the civic and social uses of roadways as places where people may walk, converse with one another, shop, or engage in other social or recreational activities.

The TAC design classification group has reviewed the existing classification systems that are noted in Newton’s Comprehensive Plan and proposes a number of recommendations on an updated roadway design classification system. Newton’s roadway design classification should take into consideration the needs of multiple types of users: automobiles, bicycles, scooters, pedestrians, and transit users. Design classification of Newton’s roads should consider the principles of Complete Streets and Context Sensitive Design. Consideration should be given not only to the characteristics of roadways as they exist today, but what it is that we intend our roadways to look like in the future. The new design classification system will take into account safety, mobility, access, travel behavior, the character of our communities and the land use and design of the buildings that are accessed by our roads.

### *Newton Roadway Functional Classification system*

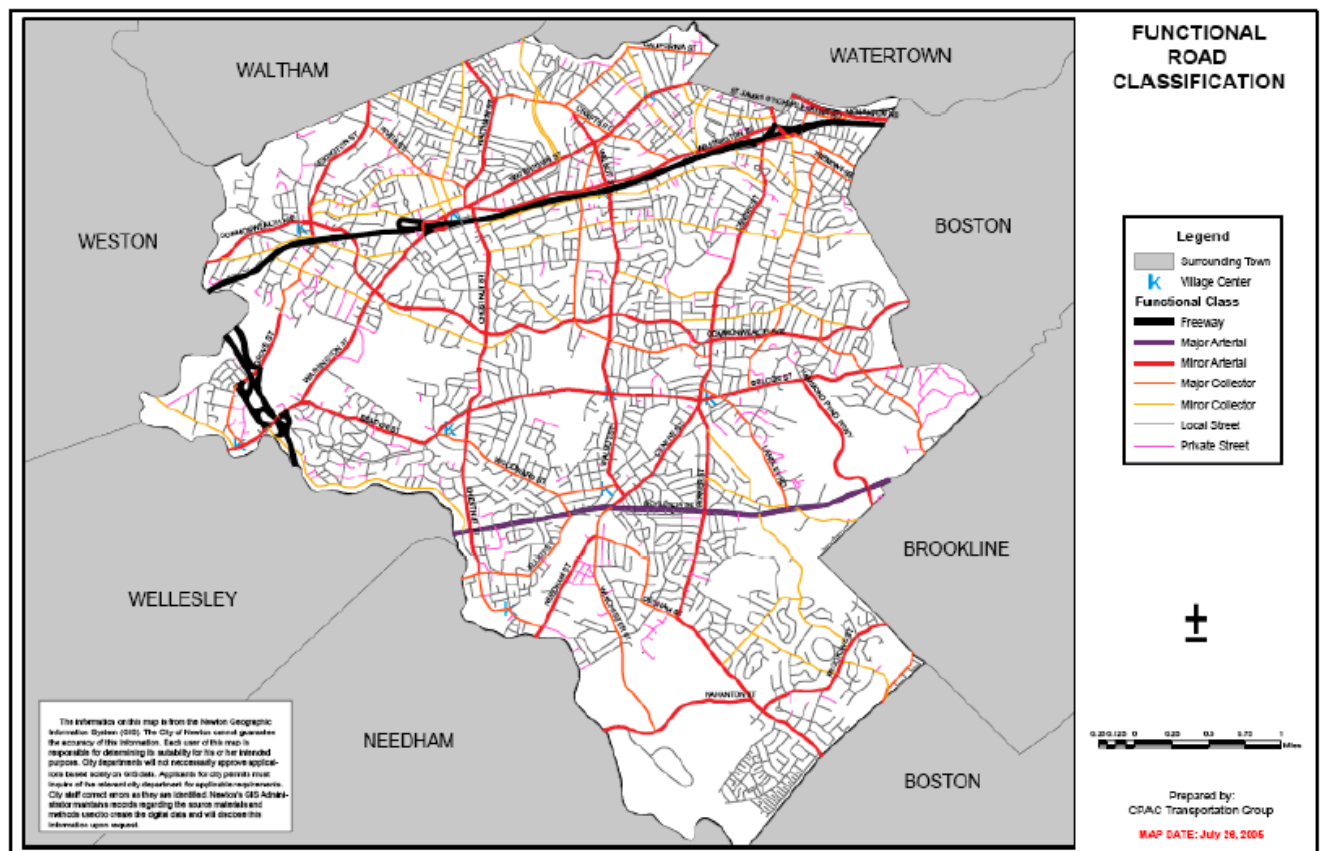
Newton has approximately 1500 streets that extend for 310 miles and which serve a variety of functions in a variety of contexts. The Comprehensive Plan places streets into one of six “Functional Classification” categories compatible with state/federal classification systems but adapted to fit Newton. The set of categories for Functional Road Classification is consistent with roadway guidelines prepared by the Mass Highway Department.

- **Freeways:** Freeways are intended to primarily serve regional and interregional trips. They allow access at major streets only and provide no direct access to abutting land. Newton has two freeways: the Massachusetts Turnpike and Route 128.
- **Major arterials:** Major arterials are intended to provide for major local and intermunicipal movements, with service to abutting land only a subordinate function. There is only one such road in this category in Newton: Route 9.
- **Minor arterials:** Minor arterials interconnect with and augment freeways and major arterials. They distribute travel to geographic areas smaller than those served by major arterials, combining a mobility function with their function to serve abutting land uses. The 20 streets or street segments that are Minor arterials in Newton typically carry

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between 10,000 and 20,000 trips per day. Needham Street and Washington Street carry up to about 30,000 vehicle trips per day.

- **Major collectors:** Major and minor collectors provide both access to abutting land and traffic circulation in residential and commercial areas. They carry traffic from local streets and that generated by the collector itself, connecting with streets of a higher classification order such as arterials. Collectors typically have trip volumes ranging from 1,000 to 10,000 vehicles per day and are subdivided into major collectors and minor collectors, depending on traffic volume and patterns of travel. Twenty four streets or segments have been classified as major collectors. They have trip volumes ranging between 5,000 and 10,000 vehicles per day.



- **Minor collectors:** Minor collectors are similar to major collectors, but generally have a lower volume ranging between 1,000 and 5,000 vehicles per day. Thirty six streets or segments in Newton are considered Minor collectors.
- **Local streets:** The local street system's primary function is to provide access to the land activities that front them. All streets that are not placed in one of the other categories and that are not private streets are considered as Local streets.
- **Private streets:** Private streets are those streets that are not public ways. All or parts of at least 367 streets in Newton are private streets.

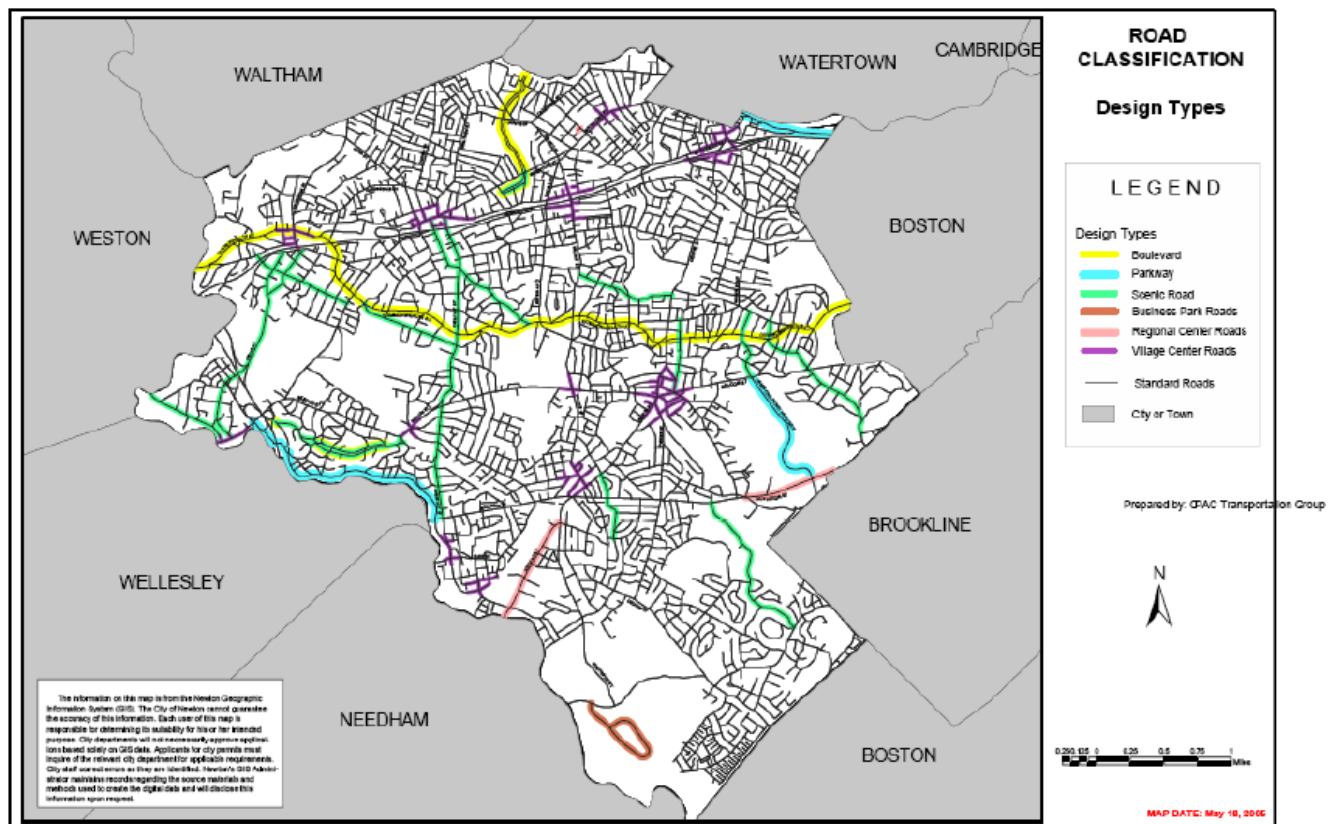


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### *Design Type Classifications*

The Comprehensive Plan (2007) notes that each street in Newton has an additional classification based on these seven design types.

- **Boulevards:** Boulevards are streets that include a lengthy landscaped center island median. Newton has three such streets: Albemarle Road, Commonwealth Avenue, and Waban Avenue.
- **Parkways:** Parkways are roads that are within or abut a park. The land areas involved are dedicated to both recreation and the movement of vehicles, designed with an emphasis on providing a special driving experience. Newton has three established parkways: Hammond Pond Parkway, Nonantum Road, and Quinobequin Road.



- **Scenic roads:** Newton has 17 roads that are designated as “scenic.” On a scenic road any repair, maintenance, reconstruction, or paving work involving the cutting of or removal of trees or stone walls requires the approval of the Planning and Development Board.
- **Village Center roads:** About twelve or more Village Centers in Newton are intended to be strongly pedestrian-oriented areas, including streets in the area of: Auburndale, Echo Bridge, Four Corners, Newton Centre, Newton Corner, Newton Highlands, Newton Lower Falls, Newton Upper Falls, Newtonville, Nonantum, Waban, and West Newton. Within

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these areas, roadways and improvements upon them are to be designed to maintain and improve the pedestrian experience.

- Major Business Area roads: Two areas in Newton each contain more than one million square feet of retail service floor area oriented to a regional market as well as serving a more local population. These roads have the challenge of reconciling pedestrian interconnections with high traffic demands: the Chestnut Hill portion of Boylston Street and Needham Street.
- Business Park roads: Newton has only one example of a road serving business uses in a business park type setting: Wells Avenue.
- Standard roads: All other roads in the City fall into this category.

The design classification system has been proposed as a way to categorize and specify design and usage guidance for each type of roadway. This guidance is intended to help define the physical alterations to existing streets, providing a set of explicit background standards for their design, regulation and utilization. Current conditions and constraints have been taken into account in noting design specifications and layout of existing streets. However, the existing design classification system is not inclusive of all of Newton's roads and transportation options. It does not explicitly take into account new principles, values and choices regarding the concepts of Complete Streets and Context Sensitive Design.

### *Revisions and updates to Newton's Design Classification system*

In revising the Design Classification system for Newton, a number of alternative systems that have been proposed nationally and elsewhere have been considered. The American Institute of Architects has proposed a system with 10 classes that reflect differing degrees of suitability for traffic movement, pedestrian activity, and building types. This system takes into account how a roadway impacts on the community and fits in with adjacent land uses. Similarly, the Province of Ontario has produced a range of alternative design standards for roadways that are more responsive to local conditions and community values. Metro Portland has a five-category system that is more complete than the traditional system in that it considers multimodal travel and integration of land use. In many new design classification systems, there is recognition of the street as a public space that performs many functions and serves various users. Streets are thought of as destinations and not just thoroughfares.

A proposed new Design Classification system for Newton may entail the following categories:

- Highway: A long distance, medium to high-speed vehicular corridor that serves regional and inter-regional trips. A highway should be relatively free of intersections, driveways, and access to adjacent buildings. Newton has two highways: the Massachusetts Turnpike and Route 128.

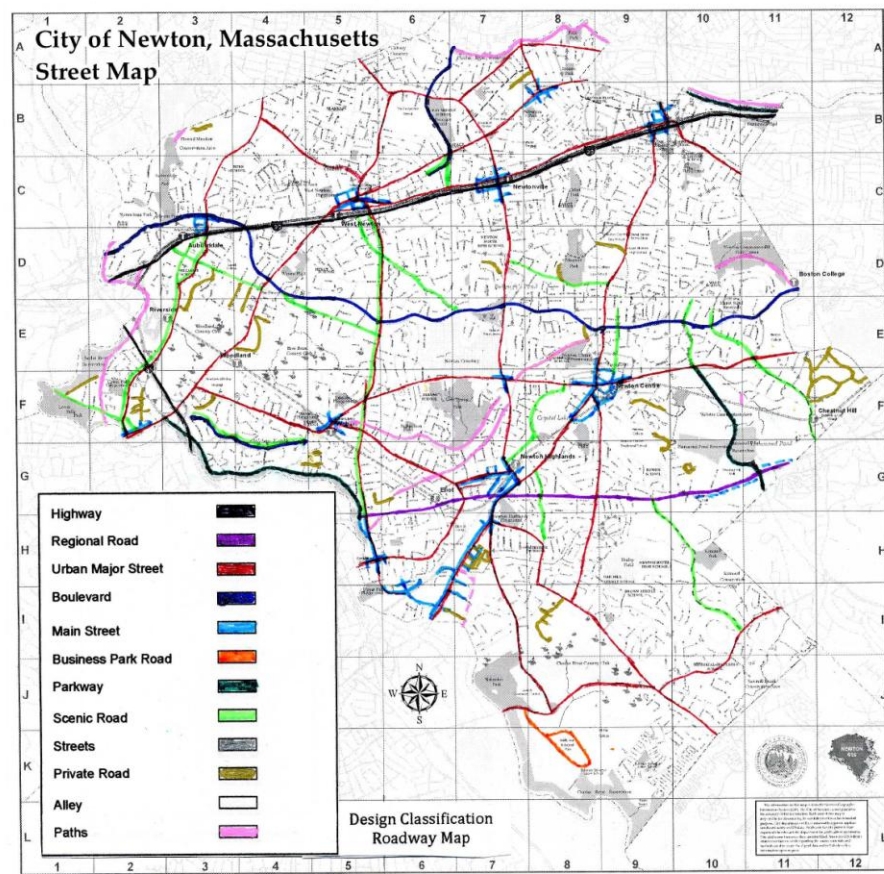
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- **Regional Route (arterial):** A medium to long-distance medium speed vehicular corridor that traverses an urbanized area. It serves major centers of activity with the highest traffic volumes. Service to abutting lands is subordinate to travel service to major traffic movements. Newton has one such roadway: Route 9.
- **Urban Major Street (arterial):** Links trips of moderate length at a lower level of mobility with emphasis on land access. May provide intra and inter-community connectivity. There are about 20 streets that are considered Urban Major Streets in Newton: Centre Street, Walnut Street, Crafts Street, Chestnut Street, Washington Street, Watertown Street, Needham Street, Dedham Street, Grove Street, Lexington Street, Beacon Street, Parker Street, Nahanton Street, Brookline Street, Waltham Street, Woodward Street, Elliot Street, River Street, California Street, Nevada Street, and part of Lincoln Street and Winchester Street.
- **Boulevards:** Boulevards are wider-scaled streets that include a lengthy landscaped center island median. These are generally short to medium distance, medium speed corridors. Buildings usually line the edge. Boulevards emphasize bicycle and pedestrian travel while balancing the travel demands of automobile users. Boulevards serve as a public focus of a neighborhood. Newton has three such streets: Albemarle Road, Commonwealth Avenue, and Waban Avenue. A part of the eastern section of Boylston Street (Route 9) may also be considered for a future boulevard design if new commercial or mixed-use growth is desired.
- **Main Streets –** These are portions of streets that traverse centers of commercial activity, generally through Newton’s village centers. Streets are designed to provide frontage for higher-density buildings such as offices, shops, apartment buildings, civic buildings, or public open space. They are usually lined by parallel parking, wide sidewalks, or side medians planted with trees. Buildings usually line the edges of these streets, generally aligned on short setbacks. Main Streets are urban in character, with raised curbs and closed drainage. Village Center Main Streets are usually segments of Urban Major Streets, along with adjacent connecting roadways that penetrate into the village center or commercial zone. Main Streets exist in the following locations in Newton: Nonantum, Newton Corner, Newtonville, West Newton, Auburndale, Newton Centre, Four Corners, Waban, Newton Highlands, Newton Upper Falls (Echo Bridge and Upper Falls village), and the entire Needham Street corridor. Parts of Boylston Street that abut commercial or mixed use zones should also be considered as having a “Main Streets” design, even though they are not within a village center. These roads are intended to have a pedestrian-friendly design and be strongly pedestrian oriented. Even in situations where large traffic volumes are present, within these areas roadways and improvements upon them are to be designed to maintain and improve the pedestrian experience.
- **Business Park roads:** Newton has only one example of a road serving business uses in a business park type setting: Wells Avenue.
- **Parkways:** Parkways are roads that are within or abut a park. The land areas involved are dedicated to both recreation and the movement of vehicles, designed with an emphasis on providing a special driving experience. Newton has three established parkways: Hammond Pond Parkway, Nonantum Road, and Quinobequin Road.
- **Scenic roads:** Newton has 17 roads that are designated as “scenic.” On a scenic road any repair, maintenance, reconstruction, or paving work involving the cutting of or removal

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of trees or stone walls requires the approval of the Planning and Development Board. Roads designated as “scenic” may overlap with other roadway designations, such as parkways and boulevards.

- **Streets:** These are small scale, low speed connectors that are designed to serve neighborhoods by carrying local traffic. Streets generally provide frontage for low-density buildings such as houses, but may also provide frontage for higher density buildings such as multi-family housing, shops, and businesses. Streets may have raised curbs and parallel parking, or may have open curbs and optional parking. Streets will often have sidewalks, tree planting, and buildings that are set back variable distances. Most of Newton’s streets that are not in any of the above categories are considered as falling in this category.
- **Private Roads:** Private roads are those streets that are not public ways. All or parts of at least 367 streets in Newton are Private Roads. Some Private Roads in Newton are paved and others are unpaved. These roads have variable widths and most do not have sidewalks.
- **Alleys:** A narrow access route servicing the rear of buildings on a street. Alleys have no sidewalks, landscaping or building setbacks. Alleys may be used by trucks and other service vehicles and may accommodate dumpsters. Alleys are usually paved to their edges. Alleys may accommodate utilities or provide driveway access to buildings.
- **Paths:** A narrow pedestrian and bicycle connector traversing a park, playground, residential area, commercial zone, or mixed-use area. Paths should emerge from the sidewalk network. Some paths may provide shortcuts between buildings or long blocks, and they may connect areas of parking. Paths may be roofed over and lined by shop fronts.




## Complete Streets and Context-Sensitive Design

In considering an alternate roadway classification system, it is important to prioritize aspects of the system. Prioritizing relationships will affect how the system is put into practice. The primary principles that will be used to implement the new classification system will be those of “complete streets” and “context-sensitive design.” The design and engineering of Newton’s roadways and other access infrastructure into a sustainable network will be based on defining and relating the parameters of complete streets and context-sensitive design.

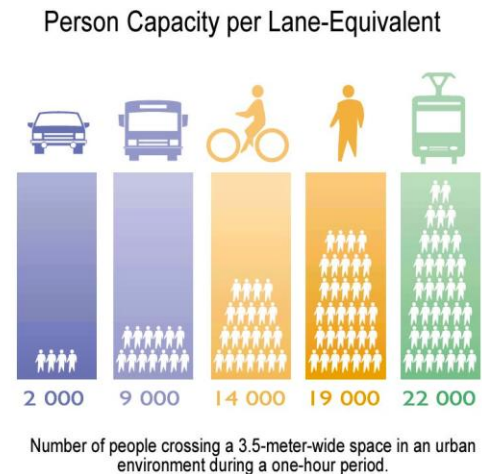
The intent of Complete Streets begins with a premise that people, not automobiles, should be put first in consideration of street design. However, the system must be appropriately concerned with accommodating all types of users and create a desirable balance. The Complete Streets approach forces us to think more about the goals of how much traffic we want on a street, rather than what a traffic model says that we have to accommodate. In Complete Streets, the user hierarchy places pedestrians first, then public transit users and cyclists, emergency vehicles, and finally motor traffic. Priority is assessed for non-auto uses and design, although issues of vehicular capacity and place context are taken into consideration. The focus of place accessibility is to get people to their activities and destinations. Accessibility to place is enabled by networks that let people quickly and easily walk, bike, and ride transit to their destinations, in addition to being able to use their cars efficiently. The Complete Streets paradigm requires a roadway system to have high connectivity throughout. Connectivity is defined by the directness of a route of travel, mandating small blocks and few or no dead end streets. Route choice means that there are multiple, relatively direct routes from point to point. Long detours that discourage walking are discouraged. Travel modes that improve connectivity and route choice also use energy more efficiently and are therefore more sustainable.

The person-capacity to place context relationship is the primary relationship that is considered in a Complete Streets paradigm. Therefore, all

<b>Consider first</b>  <b>Consider last</b>	Pedestrians
	Cyclists
	Public transport users
	Specialist service vehicles (e.g. emergency services, waste, etc.)
	Other motor traffic

Manual for Streets user hierarchy

From: Towards a Functional Classification Replacement (Aurbach, 2009)



Space efficiency of various travel modes. Source: *Ticket to the future: 3 Stops to Sustainable Mobility*. UITP, International Association of Public Transport, Brussels, 2003, based on Botma & Pependrecht, Traffic operation of bicycle traffic, TU Delft, 1991



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modes are placed on an equal footing in one framework in order to set priorities and make cost-benefit evaluations. All modes are evaluated by one same standard, which allows for flexibility in design outside of the typical roadway design handbook. The concept of Complete Streets yields a holistic perspective that better addresses efficiency and livability.

The idea of Context Sensitive design recognizes that thoroughfares are places in and of themselves. It puts links and places on an equal footing. It extends consideration of the existing classification system to the adjacent land uses and recognizes that there is a political aspect of design that involves greater public participation. When principles of context-sensitive design are implemented to roadways, planning takes into account connectivity, efficiency of travel, compact sustainable development, and context for transit use and walkability. Local places have the most status, which means that “place” wins the battle over “traffic.” It levels the playing field between traffic engineers, planners, and the community. When roadway design is contemplated, there is significant consideration placed on the desired local distinctiveness of the community, visual quality of design, and how well the new roadway will encourage social activity. Context-sensitive design in Newton recommends a well-connected street network with design in harmony with local context and a full range of pedestrian-oriented strategies. In designing streets in urban areas where access has a greater value than mobility, roads should not be designed to allow free-flow of traffic at all times, even in peak periods. Empty roads should generally not be considered as desirable or a measure of success. A certain amount of congestion may in fact be desirable.

### *Summary on Design Classification System*

As Newton considers its long-term transportation intentions, it will be important to develop and adopt an alternative classification system to that of simply relating automobile mobility to land access. Therefore, it is envisioned that the existing Functional Classification system is supplanted by a new Design Classification system that recognizes and accommodates the varying uses of roadways and fully integrates all road users based on existing and intended community values.

The new system will need to consider typical design cross-sections both on a neighborhood scale and at the roadway level itself. The design of roads should be guided by user type, area context, and appropriate travel speed. New design standards will need to be developed that modify existing design elements such as sidewalk width, the presence of trees and other plantings, bicycle accommodations, and the presence of on-street parking, all based on expected activity, contextual land uses, density of development, and a hierarchy of mode priority that favors pedestrians over automobile drivers in many cases.

Roadway segments should be in scale with the expectations of the community and the mobility and connectivity needs of the users of the roadway. In designing roadways, the orientation of buildings and parking facilities must be considered, with a focus to providing excellent pedestrian access. Allowing flexibility in road design speeds is encouraged, along with a reduction of speeds depending on the context of the roadway. In general, the goal is to provide streets that are tailored to fit within the context of our community and its long-

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term intentions for new growth, sustainable transport, and neighborhood and city character.

### **Complete Streets and Context Sensitive Design**

One of the major goals for transportation in Newton's Comprehensive Plan is to promote equity in mobility, so that people who choose not to drive will have better options for accessibility. To that effect, the concept of "Complete Streets" is an attractive one. "Complete streets" refers to considering streets as places for multiple modes of travel, whether it is by car, bus, bicycle, or as a pedestrian. Travel along Complete Streets is accommodated safely and conveniently for all users, including people with mobility challenges and those who do not drive or choose not to. Indeed, although not expressly articulated under the rubric of "complete streets," it is currently the intention of the City to adhere to such policies.

Historically, streets were thought of as the most eminently walkable places. Pedestrians walked on routes in between buildings, and the streets were considered as part of the public civic realm. As the use of cars increased and as car speeds became greater, pedestrians were banned from urban streets. Traffic signals were implemented and some streets became one-way fast thoroughfares on which the speed of car travel was considered the top priority. Streets stopped being "places" and became just routes for travel.

Gradually, there has been a movement to reclaim the street for pedestrians, bicyclists, and transit users. In some cities, notably in Europe, walking, bicycling, taking transit, and driving a car all take place on key routes. Adopting a "complete streets" policy not only encourages for the design of streets to accommodate all users and all modes of travel, but it has been associated with improved safety, increased economic vitality of commercial zones, more walking and bicycling, better air quality, and eventually reduced traffic congestion.

The concept of "context sensitive design" of roadways holds as its major premise that the character of roadways is just as important as their functionality. Context sensitive design means that roadway design is consistent and adaptable to community values. Environmental, social, and economic factors are just as important to consider in designing a roadway as is designing the road for auto travel or how fast car traffic can move on that roadway. Under the premise of "context sensitive design" it matters whether a street is in a historic or scenic neighborhood – because its design will be affected by its surroundings and not just based on the number of cars that need to travel along it. The design of streets is treated differentially: those roads where access to land uses along the street is important may be purposefully designed to promote walking and bicycle use so their travel lanes may be narrower and speeds may be lower. Context sensitive design may be implemented in situations where roadway design is intended to preserve existing or future environmental, scenic, aesthetic, historic, and natural resource values of the area.

#### *Purpose and Goals of a Complete Streets Policy*

The purpose of having a Complete Streets policy is so that citizens, public officials, government agencies, planners, and engineers can refer to an interdisciplinary approach to

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incorporate the needs of all users into the design of roadway projects in Newton. By following the principles of this Complete Streets policy, the needs of all users of streets will be accommodated, including car drivers, transit users, bicyclists, pedestrians, and adjacent property owners. This approach mandates that there is a careful multi-modal evaluation for all transportation projects in all transportation corridors and that this evaluation is integrated with the best management strategies for land use and transportation.

The following are the principle Goals for Newton's Complete Streets policy:

- 1) All users of the transportation system will be accommodated on our streets, and that this will be accomplished with respect to their safety, comfort, and convenience.
- 2) The principles of this policy will be incorporated into all aspects of transportation planning, implementation, and construction.
- 3) The best design standards, policies, and guidelines will be used to achieve the intent of this policy.
- 4) There will be a comprehensive, integrated, and connected transportation network of streets that will accommodate users.
- 5) The design of Complete Streets will fit within the existing and intended contextual basis of the community.

It is recognized that certain transportation corridors have modal priorities. However, all roadways in Newton (with the exception of interstate highways) should reflect the goal to establish a connected network of streets that adequately accommodate various users including pedestrians and bicyclists.

Adopting a Complete Streets policy is consistent with developing and maintaining a sustainable transportation system that respects the environmental goals of reducing energy consumption by enhancing alternatives to automobile driving. By enhancing Newton's transportation system with a Complete Streets approach, the result will be safer streets and enhanced access with broad appeal that will promote economic activity and meet the diverse needs of all people.

### *Implementation of Complete Streets Policy*

All transportation projects shall reflect the land-use, transportation, and multimodal needs of the citywide transportation network. Transportation projects shall be sensitive to the existing and intended context of the project as it relates to surrounding neighborhoods and should improve, not diminish access and connectivity.

Applicability: Complete Streets policies shall apply to all new construction and reconstruction of Newton's roadways, except for resurfacing activities that do not alter the existing geometric design. Any project that is funded locally or using state or federal funds will be subject to this policy. In addition, roadway projects funded directly or indirectly by private development will be subject to this policy. This includes all phases of implementation: planning, design, right-of-way acquisition, construction, and engineering.



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Requirements: Roadway projects must be planned and implemented to accommodate all users of the transportation system equitably. In addition to automobile drivers, this includes pedestrians, bicyclists, users of public transit, and adjacent land users. Design standards, policies, and guidelines based on Complete Streets solutions will be utilized by the Planning Department and the Department of Public Works. These solutions shall be flexible so that the contextual needs of the corridor can be met. Roadway projects shall be subject to such performance standards with objective and measurable outcomes.

### Process:

- A) **Process Initiation:** Any roadway project that involves roadway redesign, including new construction or reconstruction, or that involves design of non-vehicular elements shall be subject to a public participation process and show how the project is consistent with the Complete Streets policy. An initial project description that must be based on planning documents such as the *Design Classification of Newton's Roadways* and the *Bicycle Transportation Plan*, and consistent with the principles of Newton's *Comprehensive Plan* and recommendations from Newton's *Mixed Use Task Force*. The City Planning Department shall identify benchmark goals that will be attained as part of the public participation process and shall maintain open lines of communication with key parties, agencies, and stakeholders.
- B) **Project Review:** A detailed project description shall include the project scope, including vehicular and non-vehicular elements. It shall include performance measures that show how the project will improve automobile, pedestrian, and bicyclist access. Key milestones and project phasing will be presented, along with the expected costs for design and construction and dates of initiation and completion.
- C) **Project Approval:** The project will be evaluated by the city Transportation Advisory Committee, which includes Bicycle and Pedestrian advocates, the Planning Department, and the Department of Public Works for their consideration as to whether the project should be adopted. The committees shall show how the relevant project is compliant with the Complete Streets policy and point out aspects of the project that are not compliant. The committees shall either approve the project, offer alternatives for consideration that must be implemented subject to approval, or may reject the project.
- D) **Implementation of Project:** Once a project is approved and adopted, the Department of Public Works shall construct or otherwise ensure that the project is constructed as detailed in the approved project description. The Department of Public Works shall submit written status reports that will be posted on the City website and that will be included in meeting packets for the Transportation Advisory Committee and the Planning Department at least four times per year. The status report shall include a summary of project accomplishments, details of project implementation, and any other issues pertaining to fulfilling the project description.
- E) **Project Description Change:** The Department of Public Works shall report immediately to the Transportation Advisory Committee and the Planning Department any significant changes to the roadway project. Any changes that affect the project's accommodations or access to surrounding land uses will be reported immediately. The Transportation Advisory Committee will review the proposed changes and determine whether they are

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consistent with the Complete Streets policy. If a project is determined to be non-compliant, the project shall be removed from funding sources until it is again compliant with the Complete Streets policy. If changes to the project are compliant with the policy, then no further action will be taken by the Committee.

Exemptions: Projects may be exempt from the Complete Streets policy under a number of circumstances. These include projects that involve ordinary maintenance, such as cleaning, patchwork repair, and other seasonal activities to keep the road in a state of good repair. Projects that are prevented by law from providing access to pedestrians and bicyclists are exempt. In those cases, a portion of funding for exempt projects not less than 5% of the overall cost should be allocated towards improving pedestrian and bicycle access elsewhere in the city.

### *Context Sensitive Design*

According to the Federal Highway Administration, “Context sensitive” design represents a collaborative, interdisciplinary approach that involves all stakeholders to develop transportation facilities that preserves scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility. Context sensitive design considers the total context within which a transportation improvement project will exist. It is the policy of the Institute of Traffic Engineers and the Massachusetts Highway Department to consider context sensitive design in the planning and implementation of urban roadways for walkable communities. Therefore, Newton should endorse the policy of context sensitive design for all future roadway projects in the City.

Context sensitive solutions have been advanced in the planning and design of roadways where the intent of the community is to have walkable streetscapes, compact development patterns, mixed land uses, and support for pedestrians and bicyclists. In order for context sensitive solutions to be applied, it is necessary at times to have flexibility in typical roadway engineering standards in order to meet local objectives. For example, typical highway roadway standards may call for there to be a certain curve radius on an urban street in order to accommodate design speeds that are desired. However, the historical nature of the road and adjacent property owners may dictate that no changes in roadway geometry are desired since reduced traffic speeds and traffic calming is their major objective. Under context sensitive design, the needs of the community and the existing historical geometry of the road would have a priority over implementing typical current roadway standards.

The key tenet behind context sensitive design is that there must be balance between the land use and transportation functions of a corridor. Roadways must be designed to support local land uses and to insure truly multimodal facilities. Under context sensitive design, streets are considered places – and it the quality of that public space that is the main objective. Context sensitive design demands that the relationships between mobility, land use, and community interests are respected.

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In implementing context sensitive design solutions, certain goals are prioritized to achieve pedestrian and bicycle friendly communities:

- In mixed use zones where buildings are in close proximity to each other, building entrances should front directly to the street
- There should be no parking between the building and the street that fronts it.
- Pedestrian scale is desired: architectural, urban, and streetscape details are of a size and design that can be appreciated by a pedestrian.
- Development is relatively compact with a highly connected system of roadways and other access corridors.
- Streets are considered as a form of civic space, which have a strong civic character and bring lasting economic and community value.

Context sensitive design depends on defining the context of the zone through which a roadway passes. It also relates to the system of functional and design classification that describes the role of a roadway in the existing urban fabric. In context sensitive design, the design of a thoroughfare may be changed in response to changes in the surrounding context. The following definitions may apply:

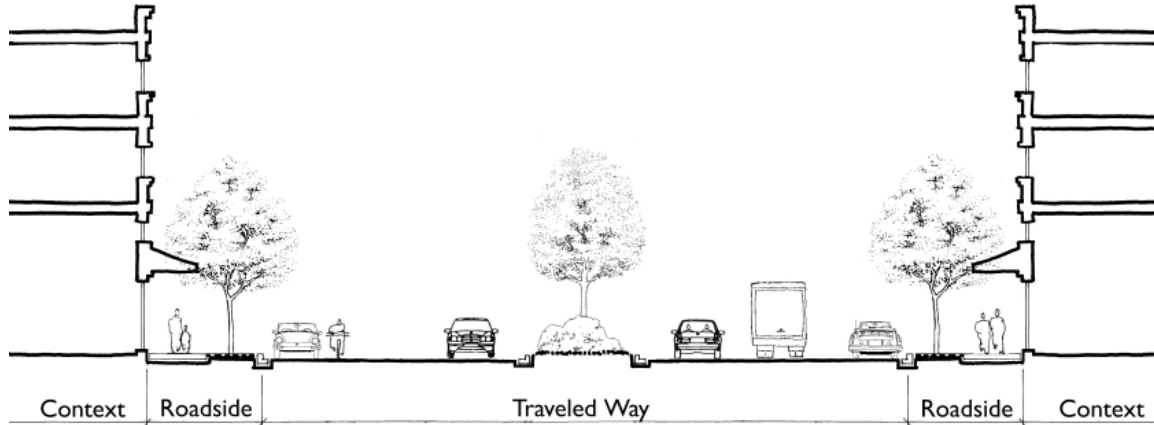
- Context: The built environment consisting of properties and activities within and adjacent to the public right of way, including buildings, landscaping, land use mix, site access, and open space.
- Roadside: The public right of way adjacent to the auto travel way, from the back of the curb to the front property line of adjoining parcels. This typically includes the sidewalk and a planting area.
- Traveled way: The public right of way between curbs, including the parking lane, bicycle lanes, travel lanes for automobiles, medians, turning lanes, and curbs and gutters.
- Intersections: Where two or more public streets meet. Intersections may be characterized by high levels of activity, shared uses between modes with the potential for multimodal conflicts, complex movements, and special design treatments.

In planning roadway projects, context sensitive design solutions mandate that critical factors in roadway design and community values and desires are identified early in the process. These factors should be identified before design criteria are established for a roadway. An interdisciplinary approach is necessary, reflecting the needs of a range of stakeholders. In such a system, key issues and problems are identified early and a range of alternatives is developed. After all options are considered, the final choice of design of a project reflects both the transportation needs of the corridor as well as the objectives of the community. It is expected that a

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healthy debate around design issues and priorities will take place as part of this process.

### Components of an Urban Thoroughfare



Source: Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, ITE Proposed Recommended Practice

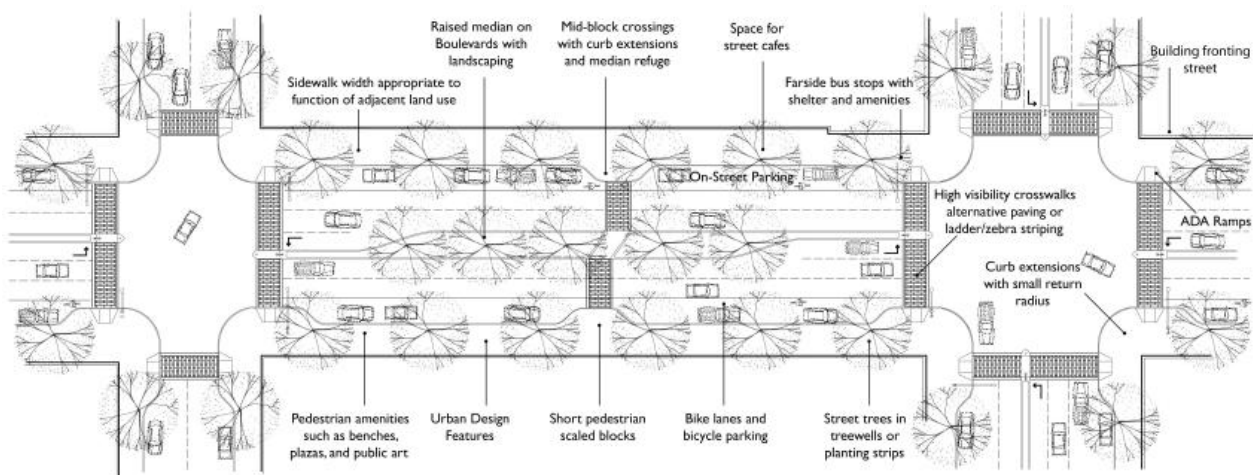
Certain design issues that may be discussed during the planning of a context sensitive solution for roadway design include:

- Design speed: The desirable operating speed for a particular context may be less than the predicted design speed based on sight distance and roadway curvature.
- Lane widths: In many cases, lane widths no greater than 11 feet are desired along urban corridors. In some cases, low volume roads may have only 10 ft or even 9 ft lanes.
- Maximum number of traffic lanes compared to existing roadway volumes: In many cases, “roadway diet” techniques may be effective in improving safety while encouraging multimodal roadway use.
- Intersection design guidance: If an intersection is intended to service large trucks, planning may consider issues such as encroachment of the truck on other vehicles in cases of wide turns. Encroachment into opposing traffic lanes may be acceptable in cases where truck traffic is infrequent, as well as multiple point turns by trucks.
- Role of level of service in design: Conventional planning recommends the highest possible level of service for all roads. In context sensitive design, it may be reasonable to accept a lower level of service if a project meets other criteria such as improved pedestrian and bicycle access.

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- Mid-block pedestrian crossings: Context sensitive design solutions may include mid-block pedestrian crossings based on agreed-upon criteria.
- Bicycle facilities: The type of bicycle facilities that are appropriate on dense multimodal urban roadways may be controversial when having separate bicycle accommodations involves trading off on-street parking. The debate is whether bicycle facilities should have equal priority with other design elements of urban streets, and may be based on the context of the street (village or residential environment).

### An Illustration of the Elements of a Context Sensitive Thoroughfare



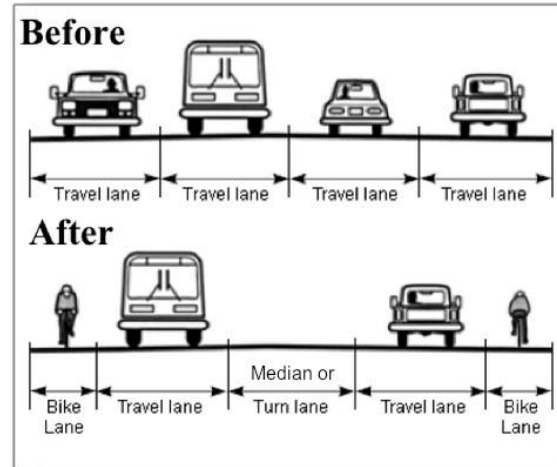
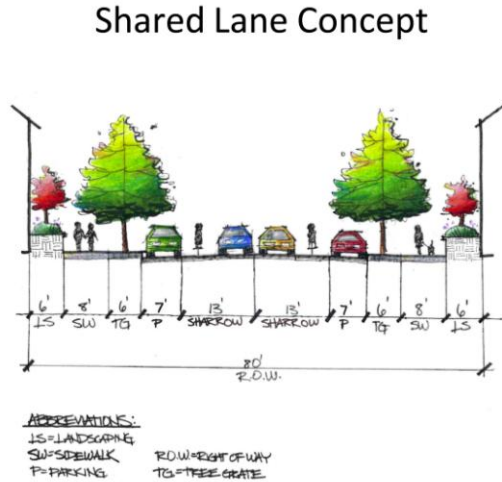
Source: Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, ITE Proposed Recommended Practice

Successful urban roadway design requires an understanding of the context of the roadway, community values and desires, the short and long range intentions of the Comprehensive Plan and other planning initiatives, and an understanding of roadway design. The design of a roadway should be considered as just as important as how much car traffic it may carry or the throughput of cars through its intersections.

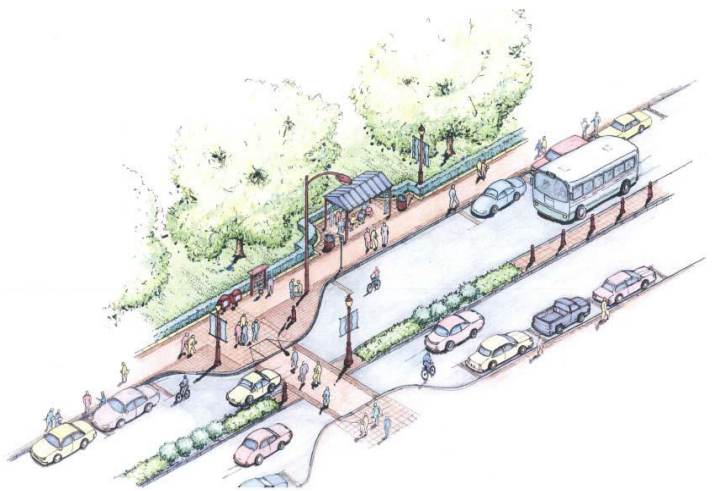
### Illustrative Scenarios

Many of Newton's arterial roadways have cross-sections that accommodate two lanes of traffic, with on-street parking in or near village centers and sporadic on-street parking elsewhere. The typical travelled way ranges from 32 to 40 feet, generally with a roadside width of 5-8 feet which includes a berm and sidewalk





adjacent to the private property line. In residential parts of Newton, implementing Complete Streets and Context Sensitive design solutions involves insuring continuous sidewalks that are clear of obstructions, bicycle accommodations, and landscaping elements. In areas where no on-street parking is desired, an example of a Complete Streets conversion for a 40 ft curb to curb distance is shown. In other cases, a “share the road” type arrangement would be appropriate. Further discussion of bicycle accommodations is covered in the Bicycle Plan for Newton. Opportunities exist on some of Newton’s wider streets to implement Complete Streets. These include Washington Street, where there are currently 4 auto travel lanes with on-street parking in certain locations, and Needham Street, where there is a 3-lane cross section. On Washington Street, where there is a 58 ft travel way, it would be possible to reduce the number of travel lanes from 4 to 2, build either center median or turning lane (where necessary), and preserve on-street parking. In this case, bicycle lanes that are 5 ft wide would run along parking lanes that are 7 ft wide. Roadway travel lanes would be approximately 11 ft wide. An illustrative “birds-eye” view is provided.



For Needham Street, a number of design options have been proposed for the 60 ft right-of-way, which currently has an auto travel way that is approximately 44-46 ft wide. Needham Street has been envisioned as continuing to have two primary travel lanes. Instead of a center two-way turning lane, Needham Street could have a median which is broken by only a few left hand turning lanes along its route. Another option would be to implement a design similar to what has been proposed for Washington Street with two travel lanes, bicycle lanes on both sides of the road, and the provision of on-street parking.

*Summary: Complete Streets*

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The charge of the Complete Streets working committee is to evaluate Newton's 310 miles of roadways and, based on the context in which these roadways are located, to promote a context sensitive complete streets policy. The working group has produced a policy document that defines the concepts of complete streets and context sensitive design and that explains and promotes a citywide approach towards Newton's roadways. Further work will define several other design classes of streets, such as "village main streets," arterials, and regional roadways and provide further illustrative examples of how a context sensitive complete streets policy could be applied to these examples.

Newton's new Complete Streets policy articulates an approach on access and mobility on our City's streets that provides guidance on how our streets may be improved when being reconstructed or when reconfigurations are contemplated. The complete streets policy considers all users of the street equitably, whether they are drivers, pedestrians, bicyclists, or transit users. It is proposed that the conventional approach to designing streets with priority to large volumes of traffic moving quickly is replaced by a community-centered, context sensitive method that gives priority to historic, aesthetic, and other desired community goals – including the goals of providing for safe and convenient access for all types of users.

### **Transit Improvement Recommendations**

The transportation system in Newton includes a variety of multimodal options. The following are ways that our system should be improved and modernized.

#### *1) Maintenance of the existing MBTA system*

The MBTA has identified significant needs related to the maintenance of its existing transit infrastructure to bring it to a "state of good repair." Newton should strongly support the MBTA in efforts that benefit the transit infrastructure in our city. As part of that support, Newton should advocate for:

- Improved bus stop amenities, including participation in the MBTA bus shelter program as identified through ridership data.
- Accessibility improvements to the commuter rail stations. Priority should be given to improving access at all existing commuter rail stations.
- Accessibility improvements to the Green line light rail system. Priority should be given first to upgrading the Newton Highlands station due to its high utilization and connection with the Rt. 59 bus.
- Enhance safety and speed of Green line by implementing technologies such as Communication-Based Train Control (CBTC) and Auto Vehicle Identifier (AVI) technology to optimize better control over spacing, flow, and speed of trains.
- Continue to implement real time vehicle arrival information systems to improve predictability of bus and train arrival times.



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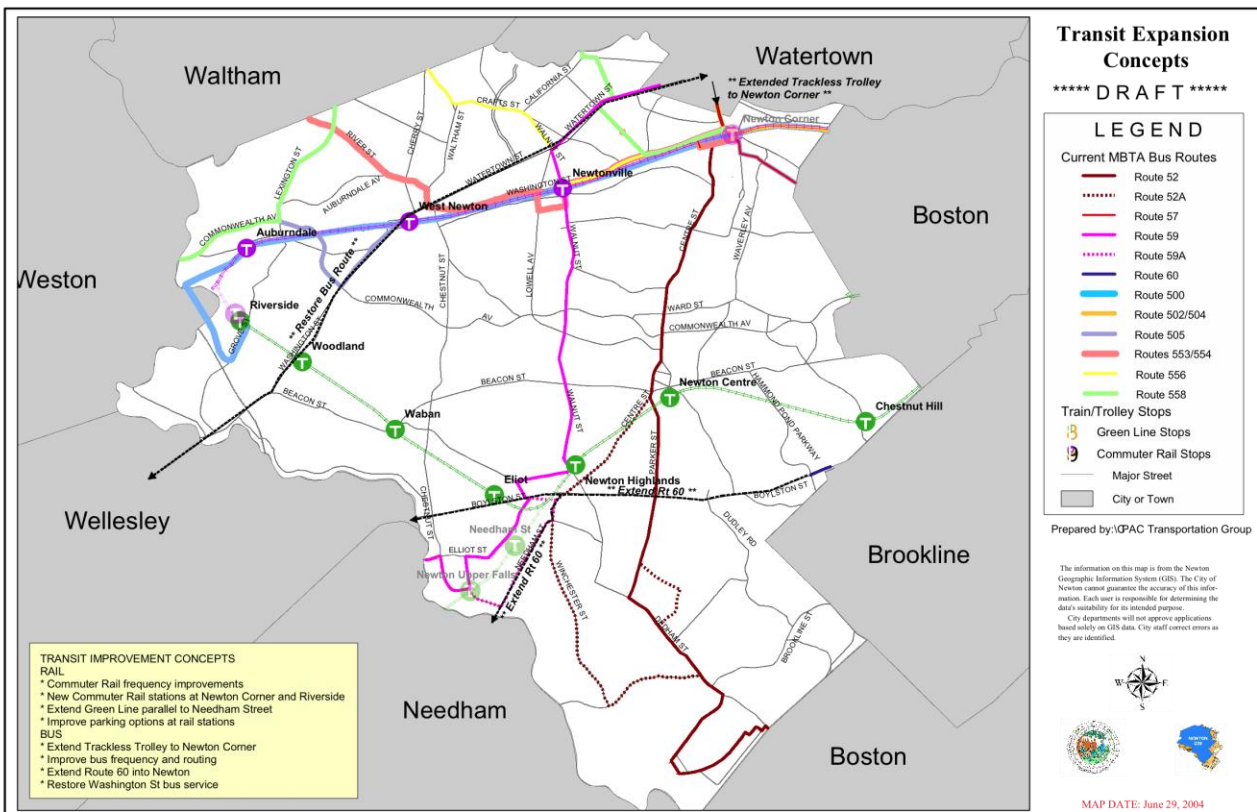
### 2) Transit System Expansion and Extensions

#### a) MBTA Bus System Extensions

Newton's Comprehensive Plan envisions two major bus route extensions based on lack of available transit options in heavily travelled corridors.

- i) Extension of the Route 60 bus along Route 9 and then to the Needham Street corridor. Route 9 has high traffic volumes and more frequent bus service may provide a welcome alternative to driving for some commuters. Because of traffic congestion and delays due to signalized intersections with failed levels of service, considerations should be given to eliminating signalized intersections in this corridor to promote through traffic.
- ii) Extension of bus service between West Newton and Newton Lower Falls along Washington Street, with service continuing to Wellesley. This latter route would improve connections to several rail stations and to buses that travel to Boston or Cambridge.

The Subcommittee recommends Newton should advocate for a study of the feasibility of extending these two bus routes to evaluate their potential utilization.





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The Subcommittee recommends the following additional specific bus enhancements to be considered:

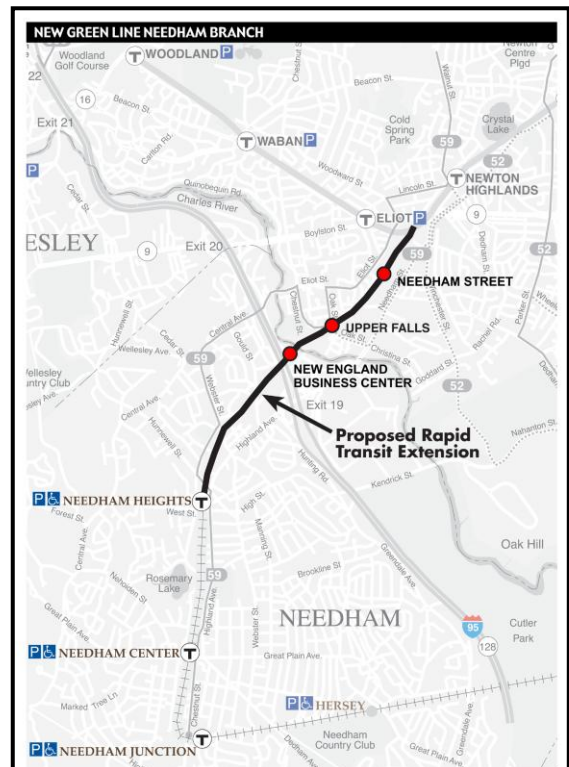
- Washington Street service between West Newton and Lower Falls, potentially extending to Newton Corner or Watertown to the east and to Wellesley to the west.
- Opportunities to improve bus service for north-south travel routes.
- Continue to work with the MetroWest RTA and the Rt. 128 Business Council to promote and develop transit services in Newton, including an expansion of service to the Wells Office Park.
- Continue to promote Riverside as a location that offers intercity and local bus service. Continue to advocate for new service that uses Riverside as a destination, such as private inter-city routes between Newton and New York City.
- Continue to work with developers to ensure that new development at Riverside will result in improved amenities for buses.

### *b) Light Rail expansion in the Needham Street Corridor*

Newton's development was shaped by railroad expansion (see Footnote #1 at end of memo for further discussion).

Currently, the Needham Street corridor has been identified as a potential area of significant economic growth in Newton. With the extension of the Riverside "D" Green line along the unused rail corridor between Newton Highlands, Newton Upper Falls, and Needham, this would allow for direct rail access of this area to the Longwood

Medical Area and downtown Boston. In addition to potentially stimulating significant economic development in the corridor, the new rail line may support the creation of a vibrant new, wholly integrated, mixed-use and mixed-income district. The new line may represent a cost-effective investment of state and federal transportation funds, as the anticipated residential and commercial densities and intensity of land use in the corridor are supportive of implementing light rail. According to the MBTA's Program for Mass Transportation (PMT) analysis published in 2010, ridership on the new line has been projected to be significant, which would significantly support the operating expenses of the new transit extension. In addition, options to support the operating expenses for the line may be considered, such as through the use of locally generated funds from new economic growth by implementing mechanisms such as tax-increment and district



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improvement financing.

Furthermore, the new line may stimulate development in the Needham Street corridor to have a pedestrian and transit orientation. The potential benefits of the new line may be not only to create an environment for new growth, but it may allow for new development to take a form that is not solely reliant on providing automobile access, parking supply, and further roadway expansion.

Because of the potential advantages described above, Newton should advocate for the undertaking of a feasibility analysis of the Needham Street corridor for light rail expansion. This study should be completed by a reputable transportation planning firm to evaluate:

- The range of anticipated project costs for design and construction
- How costs may increase over time
- An estimate of anticipated ridership upon completion
- Potential ridership on the line with potential build out of the corridor
- A detailed examination of engineering and construction issues
- A potential concept design

The cost of such a study would likely be modest. A local firm with experience in this area of study may be commissioned to do this work. The same firm could produce a conceptual plan. The Transportation Advisory Committee may provide support to the City's undertaking of this study.

### *c) Commuter Rail system improvements*

Newton's commuter rail line runs from South Station to Worcester, with stations in Newtonville, Newton Corner, and Auburndale. Potential upgrades to this system would include increased service frequency, a greater number of trips opposite the general commuting direction, and improvements in accessibility to existing stations.

At least three further improvements for commuter rail have been envisioned as part of the MBTA long range planning process. These include a potential new station at Newton Corner, a new station at Riverside, and running a shuttle-style frequent service between South Station and Riverside. Each of these options has potential benefits. A Newton Corner station could provide for further opportunities to extend trackless trolley (electric) buses from Cambridge and Watertown. A new commuter rail station would likely have a positive effect on the village of Newton Corner, which for so long as been separated by the Mass Turnpike with its complicated traffic patterns.

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Another opportunity for commuter rail exists at Riverside. Briefly in 1996, commuter rail actually ran along the spur to Riverside as a replacement for Green Line service during the great October floods. There is only about 0.3 miles between the commuter rail and Riverside station. A new Riverside station would likely enhance travel opportunities to new development that is likely along Grove Street. With a new Riverside station, it opens the possibility to bring new high frequency service between South Station and Newton. As part of new development at Riverside, improved access to the Green line, parking accessibility, and the potential for a connection between the light rail station and commuter rail should be taken into consideration.

Finally, it is recognized that improvements in capacity at South Station would allow for increased service on the commuter rail line through Newton. The Subcommittee recommends Newton should work closely with the MBTA to further investigate the feasibility of implementing these commuter system improvements.

### *3) Transit-friendly policies at the municipal level*

The Subcommittee recommends the following local municipal initiatives:

- a) For municipal employees, the City should make available and provide subsidized public transit passes. The City should work with its unions during contract negotiations to increase incentives for city employees to use public transit. Mechanisms such as use of Zip cars or municipal vehicles for work-related mid-day local trips should be made available to employees who use public transit. Municipal employees should have access to all public transportation services or private shuttle buses that are available in Newton.
- b) The school Department should keep records for its staff in terms of journey to work trips. Incentives for reduced private vehicle use should be implemented on a work-site specific basis. The City and the school system should work together to reduce the availability of student parking and to discourage use of private automobiles by students for school-related trips, with appropriate exceptions made for handicapped students.
- c) The City should work with the MBTA to (i) establish a reduced rate transit pass for Newton residents traveling between Riverside on the Green line and the Reservoir station; (ii) obtain pilot funding to evaluate new bus route service to underserved parts of Newton based on potential demand; and (iii) coordinate the timing of certain public transit services at mode switch points to facilitate multimodal transfers. This should also include improvements in safe and convenient bicycle access to public transit vehicles as well as secure bicycle storage at MBTA stations.

### *4) Promoting transit use as part of the permitting process for businesses and for new growth and development*

The Subcommittee recommends the following local improvements to the current permitting process for business and development:

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- a) Parking policies should be revised to enhance access to municipal lots and other shared parking opportunities so that the need for new parking spaces is reduced for new development. Businesses should be encouraged to seek a reduced number of parking spaces and to provide financial support for alternatives to single-occupancy vehicle trips, such as shuttle bus services. New and substantially expanded Newton developments should be required as part of the permitting process to support funding for local transit improvements to include both private shuttle services as well as to support public transportation enhancements.
- b) Businesses in Newton should be required to maintain and make public records of the number of employees using public transit, private single-occupant vehicles, multi-occupant private vehicles, bicycles and scooters, and journeys by pedestrian trips. Developers who meet at least a 20% non-auto access goal will receive more favorable treatment in terms of further expansion, parking waivers, and other advantages.
- c) Businesses in key commercial corridors, such as the Route 9 corridor and the Needham Street corridor, should be required to contribute to local transit improvements, such as operating private or public bus service. The bus service would connect to existing rail stations or other bus routes, in addition to connecting between the corridors and nearby Newton village centers such as Newton Highlands and Newton Centre. Transit enhancements should run at reasonable headways, no greater than 15 minutes, in order to be attractive to potential users.
- d) New developments in Newton, as well as any existing business with greater than 15 employees, should be required to provide subsidized transit passes for their employees. Any business requiring a special permit should have this requirement, which would be a condition of receiving a special permit. Similarly, the City should encourage shared-car services (such as ZipCar) and provide advantaged parking spaces for users of shared-car services in village centers and near rail-based transit stations.
- e) Where public transit is lacking, developers should be encouraged to provide for private bus shuttle options. For example, private bus shuttle services may provide additional connections between the malls along Route 9 in Chestnut Hill and the Newton Centre or Chestnut Hill Green line stations. Similarly, a shuttle bus route may be implemented between Boston College and its Newton campus and Chestnut Hill campus via Newton Centre.
- f) Transit-friendly recommendations should be written into Newton's zoning codes and may include the following:
- In mixed-use zones, for new residential units, there shall be a minimum of 0.5 and a maximum of 1.5 parking stalls for each dwelling unit. For commercial use, there shall be a minimum of one parking stall for each 1500 feet minimum and one parking stall for each 400 feet maximum square feet of gross floor area.

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- No off-street parking shall be provided in the front setback of retail, office, or commercial buildings.
- New development that is located within 1250 feet of a rail-based transit station will be granted an additional FAR = 1.0 in addition to what is currently allowed. Similarly, if the percentage of gross floor area in residential use exceeds 50% of the new development, then an increase in FAR = 1.0 will be allowed.
- The petitioner must enable that no more than a maximum of 80% of trips to the project shall be by auto access, with the rest (at least 20%) being by pedestrian, transit, or bicycle use. A mechanism for enforcing motor vehicle trip limits shall be devised and mitigations shall be identified if agreed-upon auto trip generation limits are exceeded by 10%.
- The developer shall allocate at least an equivalent mitigation for non-roadway and non-single occupancy auto-based accessibility improvements as for roadway improvements.
- Pedestrian and vehicular access routes and driveway widths, which shall be determined by the board of aldermen, must be appropriately designed between the new development and abutting parcels and streets, with consideration to streetscape continuity and an intent to avoid adverse impacts on nearby neighborhoods from such traffic and other activities generated by the new development as well as to improve traffic and access in nearby neighborhoods.
- The new development shall provide building footprints and articulations appropriately scaled to encourage outdoor pedestrian circulation; features buildings with appropriately spaced street-level windows and entrances; includes appropriate provisions for crossing all driveway entrances and internal roadways; and allows pedestrian access appropriately placed to encourage walking to and through the Development Parcel, including pedestrian connections within the development and to the surrounding neighborhood.
- The new development will provide a description of a proposed transportation demand management (TDM) program identifying commitments, if any, to a designated TDM manager, employer contributions to employee public transportation passes, shuttle bus capital contribution, car pool, van pool, guaranteed ride home, flex hours, promotional programs, support for off-site pedestrian and bicycle accommodations, and similar efforts;
- Retail and commercial: No accessory parking shall be required for retail and commercial uses under 1000 square feet of floor area that are located on the ground floor and front on and have a public entry directly onto a publicly accessible street.

### *Summary regarding Transit Recommendations*

By their nature, transportation systems tend to be regional in nature. Although trip patterns are now more dispersed than they have been historically, there is still a tendency for many trips in Newton to follow radial corridors into the Boston urban core. Enhancements to

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Newton's commuter rail, light rail, and bus service may provide for new opportunities for non-auto based travel.

To accomplish any significant changes in our public transportation system, Newton will need to advocate strongly at the state and regional level for limited available funds and set clear priorities. The recommendations of the Transportation Advisory Committee are intended to help identify opportunities for transit enhancements, to advise the City on priorities for transit-related improvements, and to propose a workable action plan to accomplish these goals.

### **Bicycle Accommodations**

The guiding principles for Newton's Bicycle Accommodation Plan are to enhance and promote equity in mobility in Newton and to maintain city character and quality of life. To accomplish this, alternatives to automobiles as the sole mode of transportation need to be given equal consideration in the planning and funding process, including bicycle use, public transit, use of scooters, and improved pedestrian access. In order to achieve these goals, the city will need to create a plan that enables bicycling to become a safe and viable means of transportation in Newton. Bicycling should be considered a safe and feasible way for doing errands, for commuting, and for recreation. In many of our neighboring communities, bicycles have been integrated into the fabric of overall transportation, and it is the intention of this Plan to help achieve that result for Newton as well.

#### *Background*

About 10 years ago, a consultant (Greenman-Pedersen, Inc.) was hired by the city to create a bicycle plan. This was followed by work done during the drafting of Newton's Comprehensive Plan. Although a preliminary plan was written, the Comprehensive Plan made only brief mention of bicycle accommodations, leaving the task to develop a formal plan for the future. At approximately the same time (2006), the Bicycle and Pedestrian Task Force created a draft bicycle plan and bicycle accommodations map. Bike Newton came into existence in 2008 and adopted the original draft plan developed as part of the Comprehensive Planning process, including a map of potential marked bicycle routes. In early 2010, Newton applied to be designated as a "Bicycle Friendly Community" but was not considered to have reached goals to receive that designation. Meanwhile, in Newton 2010 became known as the year of multiple roadway fatalities, some involving bicycles and scooters.

#### *Goals of a Newton Bicycle Plan*

The city will adopt a bicycle master plan that evaluates the needs of non-motorized users and priorities infrastructure investments to ensure that there are uninterrupted networks of walkable and bikable streets. To accomplish this, the Bicycle Accommodation group has worked to evaluate best practices and to draft a reasonable and progressive bicycle plan for Newton. Resources that have been used include elements of plans developed and implemented by other cities (Boston, Chicago, New York City are examples). The work done

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already in Newton can and should serve as a framework under which to develop a new, unified plan. The objectives of the group will be to:

- Create a bicycle plan that promotes safe use of bicycles
- Increase the comfort and ease of bicycling in Newton
- Work to improve conditions so that bicycle use increases in Newton
- Adopt a set of design guidelines for Newton streets for bicyclists
- Agree on a map of present-day and future bicycle routes in Newton

The intention of this effort will be to present a plan for endorsement by the mayor (Fall 2011), adoption by the Board of Aldermen (Winter 2011-2012), and implementation by the Planning Department and the Department of Public Works beginning immediately upon adoption. The City will commit to fully implementing the bicycle master plan by 2020.

### *Implementation of Newton's Bicycle Plan*

It is recognized that in order to implement an effective Bicycle Accommodation plan, there will need to be a conscious change in orientation towards how decisions are made about transportation improvements. These changes will need to take place at all levels of Newton government, including the executive and legislative level, within the planning department, the public works department, and at the level of enforcement.

*"While ad hoc improvements may be useful on a granular scale, walking and bicycling do not become real options for people unless there are reliable, safe, and completed networks in place."*  
[<http://smartgrowthamerica.org>]

Implementation of a bicycle plan must make bicycling safe and convenient for cyclists of all ages and abilities. The city will need to install bicycle facilities based on design specifications that are intended to achieve this goal.

*Action item #1: The City will allocate at least 5% of its annual Chapter 90 transportation budget towards implementing the Bicycle Accommodation Plan*

Among the design elements that will need to be implemented, the city will adopt and install signage at intersections and on roadways that will improve safety for bicyclists. Based on the Bicycle Plan, the City will clearly designate the routes intended for bicycle access and will allocate funds to repair City streets to improve safety.

*Action item #2: The City will adopt a Newton Bicycle Map*

Following a planning process to adopt a Bicycle Map by Fall 2011, the adopted Newton Bicycle Routes Map will show current bicycle routes, including on roadways where bicycle facilities have not yet been implemented, as well as future bicycle routes. The Newton

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Bicycle Map will include strategically located bikeways as recommended in the Newton Bicycle Accommodation Plan. These bikeways will link Newton's villages and major destinations, including MBTA stations, schools, libraries, business districts, the Charles River Bicycle Path, parks, and to bordering communities.

### *Action item #3: The City will work to create a Bicycle Sharing Program*

The City will cooperate with Boston to create a bicycle-sharing program that will extend to Newton in conjunction with the one planned for Boston. The City will remove any zoning obstacles to implementing such a bicycle-sharing program, such as the prohibition on advertising for bicycle storage locations. Newton will draft new ordinances in the zoning code that will provide incentives to Newton businesses to encourage and create bicycle-sharing and bicycle delivery services.

### *Action item #4: The City will maintain and publicize mechanisms to report safety concerns*

The City will maintain and publicize its "311 system" and an on-line web-based method (similar to bikewise.org) for reporting bicycle accidents and the resulting police reports. The City will also maintain and publicize an on-line web-based mechanism for reporting safety hazards to bicyclists (potholes, sunken storm drains, gravel and other broken pavement, fallen tree limbs, etc). This system will include a schedule for fixing unsafe conditions and infrastructure and include a posting of the dates when the safety hazard was reported, acknowledged, and fixed.

### *Action item #5: The City will appoint a Bicycle Coordinator and Bicycle Advisory Committee*

The City will appoint a Bicycle Coordinator to implement the Bicycle Accommodation Plan. The Bicycle Coordinator will be an advocate of increased bicycling as a method of transportation and recreation and will work with an appointed Bicycle Advisory Committee. The Bicycle Coordinator will facilitate communication among City agencies, with state agencies, bicycle groups, and neighboring communities. The Bicycle Coordinator will be responsible for bringing new and innovative practices to Newton that concern increasing bicycle use and safety. The Bicycle Coordinator will develop and implement a program to educate all citizens, including school-age children and teens, about bicycle safety laws, the mutual responsibilities of motorists and bicyclists, and best practices. The Bicycle Coordinator will continue and expand the policy of enabling "bicycle and pedestrian promenades," which are temporary road closings to automobiles in certain areas on weekends (as done on Lake Avenue, Crystal Lake).

### *Action item #6: The City will improve Bicycle storage facilities*

The City will greatly increase the number of free and privately sponsored, conveniently located bike racks and bike cages. Secure bicycle parking area will be designated in parking lots, requiring a decrease or elimination of automobile parking in some cases. The City will incorporate bicycle storage requirements into the zoning code so that new



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development and redevelopment results in an appropriate gain in bicycle parking facilities and encourages bicycle use. The City will also implement valet bicycle parking for events such as the Farmers' Market and Fairs in order to encourage bicycling and to diminish the use of cars and traffic congestion.

### *Action item #7: The City will obtain a Bicycle Friendly Community designation*

The City will endeavor to obtain a Bicycle Friendly Community (BFC) designation, at a minimum of a bronze level, from the League of American Bicyclists by 2012. The League of American Bicyclists has made recommendations, both to be implemented immediately and in the long term, upon reviewing Newton's 2010 submission for the BFC designation. The City will take these recommendations and, through the Bicycle Coordinator and other department heads, will act on these recommendations. The Bicycle Coordinator will be responsible for ensuring that progress is being made and that the recommendations of the League of American Bicyclists are prioritized and incorporated into the annual City transportation budget.

### *Action item #8: The City will work to increase municipal bicycle use*

The City will encourage bicycle use among city employees by promoting the use of existing city-owned bicycles for short trips by city employees and by working to expand the fleet of city owned bicycles. The City will provide improved secure, covering bicycle parking in various city-owned facilities so that city employees may be able to travel between city buildings and sites using bicycles. The City will provide locker rooms and changing facilities in certain city-owned buildings for bicycle users and commuters. The City will expand these policies to include the school system, encouraging teachers and students to use bicycles instead of driving, whenever safe and feasible.

### *Action item #9: The City will change its development permitting process to encourage bicycle use*

The City will change its zoning ordinance so that larger commercial establishments, as well as those businesses seeking special permits for expansion of operations, are required to contribute to the development of bicycle infrastructure. Costs for transportation improvements related to the development must be allocated for new bicycle infrastructure such as bicycle paths, bicycle lanes, and other bicycle accommodations (sharrows, signage) on private and city roadways that are impacted upon by the development. New development and existing businesses with large numbers of employees must be required to install and purchase bicycle racks and to offer employees the opportunity to participate in bicycle safety education programs, both for employees who use bicycles and for those who drive.

### *Action item #10: The City will collaborate with the MBTA to improve bicycle facilities*

The City will develop a line of communication with the MBTA and work with the relevant departments within the MBTA to improve the amount, quality, and location of bicycle racks at MBTA Green line and commuter rail stations, as well as at key bus stops such as

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those for commuter buses to Boston. The City should work with the MBTA to allow bicycle access on the Green line and increase the number of commuter trips and buses in Newton that allow bicycles. The goal is that all public transit trips in Newton are equipped with bicycle carriers or a way to take a bicycle on a transit trip.

### *Summary on Bicycle Accommodations*

Bicycle travel has been increasing in many communities and it is apparent that providing improved bicycling facilities is an important factor in increasing bicycle utilization. Newton must strive to improve safety and accessibility for bicyclists. Although it is recognized that bicycle travel may constitute a modest share of trips in Newton, the use of bicycles provides a valuable resource for mobility and for recreation that should be encouraged. Within fixed width rights-of-way, it may be challenging to find the space to incorporate bicycling as well as pedestrians, parked cars, and moving cars. For that reason also, it is important that Newton has a plan in place to guide satisfying the varied needs of all roadway users.

By implementing policies and practices of Complete Streets and Context Sensitive roadway design, it is hoped that Newton will develop a plan that reflects a reasonable equity and compromise among needs. By categorizing how streets may accommodate bicycles, both in key corridors and in village centers, the Bicycle Accommodation Plan proposes an implementation that involves simple striping and signage, as well as more substantial structural changes in certain locations. Having a flexible and realistic bicycle accommodation plan will help achieve the goals for equity in mobility that are sought for Newton.

## **Illustrative Case Presentation**

### **Introduction**

The Needham Street corridor represents a potential example of an illustrative case scenario in which new transportation policies can be implemented in Newton. Whereas most of Newton has experienced development that is in a mature form that is unlikely to substantially change, build-out analysis has identified Needham Street as an area where substantial new growth may be accommodated. Through a corridor planning program that addresses transportation options and prospectively envisions land use planning, it is possible to develop a unified transportation-land use plan for Newton's most important mixed-use corridor.

The following factors may be considered in developing a plan for the Needham Street corridor:

Transportation improvements:

- Roadway redesign and reconstruction for Needham Street and adjacent streets
- Light rail extension along railroad right-of-way with new stations
- Bicycle accommodations along Needham Street and adjacent areas

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- Pedestrian improvements to create a “walkable community”
- New parking solutions to provide access while reducing overall impact

Land use improvement:

- Zoning changes that will promote traditional mixed use development
- Integration of corridor into urban fabric of surrounding neighborhoods
- Design guidelines to create cohesive and attractive physical environment
- Improved relationship to existing open space and creation of new open space
- Creation of several foci of civic space or community space

The principles used to create this Illustrative Scenario are those articulated in the TAC Transportation Planning amendment, along with work done by the Mixed Use task force, the recent presentation by MIT students, and the tenets of Newton’s Comprehensive Plan. The overarching goal is to promote the Needham Street corridor as an economic development zone that can bring substantial public benefit to Newton and the region while preserving and enhancing the values and intentions of the community that it serves.

### **Existing Conditions**

The Needham Street corridor consists of a major arterial street, Needham St/Highland Ave, which carries between 25,000 – 36,000 trips per day, depending on the location where measurements are taken. The corridor is adjacent to other major transportation resources:

- Route 9: ADT = 57,000
- Route 128 (95): ADT = 137,000
- Route 90 (Mass Pike): ADT = 122,000
- Green line (D branch): Daily ridership = 20,960

It is estimated that approximately 43% of trips along Needham Street are by regional or pass-through traffic.

The Comprehensive Plan identifies Needham Street as one of Newton’s four regional business areas, consisting of about 2.5 million square feet of commercial real estate or about 24% of Newton’s overall commercial space. The commercial properties along Needham Street are valued at approximately \$300 million, generating property tax revenues of about \$5 million per year for Newton. There are an estimated 200 businesses in the corridor which employ approximately 4000 individuals. In Needham along Highland Avenue, the economic implications are similar as the 215 acre New England Business Center contains about 5 million square feet of commercial space providing 57% of the commercial tax revenues of Needham. Along with the parcels near Gould Street, the corridor represents about 70% of the commercial tax revenue in Needham, contributing almost \$10 million of the overall \$14 million in commercial property taxes of that town. There are approximately 10,000 employees in the Highland Avenue part of the corridor, representing just over 50% of all jobs in Needham. Recently, there have been new residential developments in the corridor: Avalon Bay in Newton (300 units) and Charles River Landing in Needham (350 units).

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Planning exercises have identified the corridor as having potential for significant new development. The density on the Newton side is only about an FAR=0.3, and it is projected that an additional 3 million square feet of commercial space may be built under current zoning. On the Needham side, an additional 2.5 million square feet of commercial space have been projected for the New England Business Center. The Needham side of the corridor is somewhat isolated from the residential parts of the town by Cutler Park, Route 128, and the Charles River, with only a small traditional residential community at Highland Terrace and Riverside Street. However, the Newton portion of the corridor abuts well-established and dense mixed-use neighborhoods in Newton Upper Falls and Newton Highlands.

### Overall Planning Principles

Newton's Comprehensive Plan identifies the Needham Street corridor as a prime opportunity to realize new mixed-use development. As noted in the plan:

*Intensive well-planned corridor development is anticipated and welcomed on Needham Street as long as it is integrated with and helps produce transportation and other enhancements to make the impact of corridor development a positive one.*

Other national, statewide and regional planning documents call for new development to be oriented around "livability principles," to strive for being environmentally responsible, and to result in equitable economic improvements. The Livable Communities Act (2009) has identified six guiding principles that agencies will use to coordinate federal transportation, environmental protection, and housing investments.

- **Provide more transportation choices.** Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- **Promote equitable, affordable housing.** Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- **Enhance economic competitiveness.** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- **Support existing communities.** Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and to safeguard rural landscapes.
- **Coordinate and leverage federal policies and investment.** Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the

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accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

- **Value communities and neighborhoods.** Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

There is a strong consensus that continuing the status quo in terms of transportation and land use policy in places like the Needham Street corridor is unsustainable. The principles articulated in Newton's Comprehensive Plan, the Sustainable Development Principles adopted by the state, regional efforts by organizations such as the MAPC and the Boston MPO, and national standards as set by the Livable Communities Act will guide future investment and development of the Needham Street corridor.

### ***Complete Streets: Roadway redesign for Needham Street and surrounding streets***

Based on the TAC Complete Streets recommendations, Needham Street will be designed following a public participation process. Needham Street will be redesigned as a place for multiple modes of travel, whether it is by car, bus, bicycle, or as a pedestrian. Plans for Needham Street will reclaim the street for all users with improved safety, better air quality, improved access to adjacent land uses, and reduced traffic congestion. Needham Street will be designed consistent with community values and with regard to the historic neighborhoods that surround it. Specifically, efforts will be undertaken to purposefully reduce travel lanes for automobiles so that bicycle use and walking will be promoted. Adjacent streets will be subject to similar design standards so that there is a comprehensive, integrated, and connected transportation system in the corridor.

#### Process:

**Process Initiation:** Redesign of Needham Street will be subject to a public participation process. The design of the street must be consistent with the Complete Streets policy and be based on planning documents such as the *Design Classification of Newton's Roadways* and the *Bicycle Master Plan*. Per the recommendations of the *Mixed Use Task Force*, changes in the design of Needham Street will not degrade but improve access for the corridor.

**Project Review:** Performance measures shall be determined that show how the redesigned roadway will improve automobile, pedestrian, and bicyclist access. Key milestones and project phasing will be presented.

**Project Approval:** The project will be reviewed by the successor to the Transportation Advisory Committee, and the review process will include members of the community, business owners, and DPW/Planning department staff. The committee will be able either to approve the project, offer alternatives, or reject the proposed changes.

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Implementation of Project: The Dept of Public Works shall submit written status reports which will be posted on the City website advising of key project accomplishments and other details of fulfilling the project description.

### Principles of Context Sensitive Design

In following principles of context sensitive design that are based on enhancing walkable, pedestrian-friendly communities, the Needham Street project shall include the following:

- Building entrances to properties along the corridor shall be directly from the street, and therefore primary access shall not be from rear garages or parking lots.
- There shall be no parking between the building and the street that fronts it.
- Pedestrian scale is desired, including architectural and streetscape details that are of a size and design that can be appreciated by the pedestrian.
- Uniform setbacks are desired, with minimal setbacks from the public right of way where possible.
- Rear access routes for cars and pedestrians shall be interconnected.
- Overhead utilities shall be placed underground, except for street lighting.
- Sidewalks shall be widened to ideal widths of at least 10 feet with street trees planted in grates along the corridor. This may require easements from private property owners.
- Driveways shall be minimized and curb cuts eliminated as much as possible. Auto access to businesses, where necessary, should be through shared driveways or from existing side streets or an interconnected street network in the rear of properties.
- Left turns shall be restricted to existing side streets, with left turns to parking lots and driveways minimized.
- Intersections shall be designed with minimal curb radii, and roadway “diet” techniques will be implemented whenever possible.
- Bicycle accommodations shall be provided along Needham Street

### Design options for Needham Street

Any potential plan for a newly reconstructed Needham Street will be markedly different from the current roadway geometry. The Transportation Advisory Committee therefore strongly recommends that the current 3-lane design plan for Needham Street be discarded.

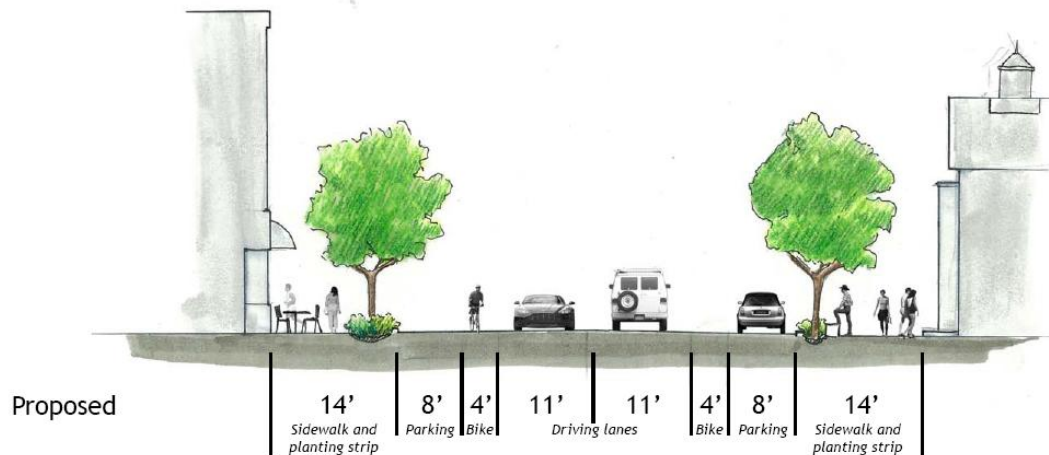
Both design options that are proposed advocate for primarily a two-lane design for Needham Street extending to Winchester Street to the east and across the Charles River bridge to the west. In the drawing above, Needham Street is portrayed as having two travel lanes (11 ft wide), two bicycle lanes (5 ft wide), and a landscaped center median (10 ft wide). In the few areas where left turns will be allowed, the center median will be replaced by a turning lane.



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The alternate design for Needham Street calls for a streetscape similar to that which is found in many of Newton's village centers and throughout New England. This "main streets" design calls for two lanes of auto travel, occasional left turning lanes where necessary, and for on-street parking. In this plan, approximately 300 public parking spaces may be added to the street, offsetting parking requirements for adjacent businesses and providing a welcome buffer to pedestrians walking on the street. Studies have shown that having on-street parking will not degrade the flow of traffic on the corridor and that traffic flow will actually improve over the current situation as curb cuts and left turns are reduced. In both streetscape options, bicycle lanes are featured prominently. In both options, sidewalk easements will be necessary from adjacent property owners. However, it is expected that most property owners will realize significant value from the improved corridor and that obtaining easements will not be problematic.

### STREETSCAPE IMPROVEMENTS



A Complete Streets approach to Needham Street. A) Two-lane design with landscaped median (top) and B) Two-lane design with bicycle lanes and on-street parking (bottom)

The Transportation Advisory Committee calls for preservation of the historic Charles River bridge in its current width and sees no reason to waste state or local funds to undertake unnecessary widening of the bridge. The bridge must continue the bicycle lanes that are on Needham Street across the river and should include a widening of sidewalks. At the Oak Street intersection, a left turn lane will continue to be featured on the eastbound approach into Newton.

Similarly, the Transportation Advisory Committee calls for the commercial segment of Winchester Street between Needham Street and Centre Street to have a two-lane auto configuration. The current plans for a four-lane cross section should be discarded. The two lane cross section will allow for widened sidewalks and continuous bicycle lanes that will extend to Centre Street as per the Bicycle Master Plan. The four lane cross section is not consistent with

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a “complete streets” or “context sensitive design” paradigm and will degrade safety for all users.

### *Design Classification as it applies to the Needham Street corridor*

Under the traditional functional classification system of roadways, Needham Street is considered a minor arterial. In its general area, Route 9 is considered as a major arterial and Route 128 and the Mass Pike are considered freeways/highways. Elliot Street, Winchester Street, and Oak Street are considered major collector streets. Other streets in the corridor are either local streets or private streets. In addition, there are a number of private interconnecting driveways and paths between parcels that do not appear on the Newton street map.

Newton’s new Design Classification system would propose the following categories for streets in the corridor:

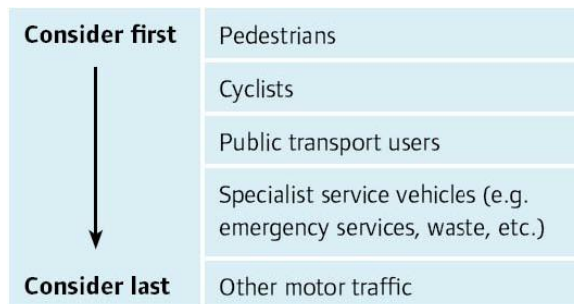
Needham Street will be categorized as an “Urban Major Street.” As such, it will be designed such that it fulfills its purpose of linking trips of moderate length at a lower level of mobility but with emphasis on land access. As noted, the Needham Street corridor is of primary economic importance to Newton and therefore access to adjacent land parcels is of utmost importance. This fact takes precedence over the mobility needs of through-traffic, understanding that approximately 40% of current traffic on the street is “cut-through” traffic. As an “urban major street,” Needham Street will be categorized similar to streets like Centre Street and Walnut Street and will therefore be expected to be consistent in design to these streets.

Elliot Street, Oak Street, Winchester Street will also be categorized as “Urban Major Streets.”

Other Streets in the corridor will be categorized as “Streets.” It is recommended that currently noted “private streets” such as Christina Street and others in the corridor are taken under city ownership with a priority to upgrading their infrastructure, providing sidewalks, and burying utilities where existing overhead.

Main Streets: The design classification system calls for certain portions of streets in Newton to be considered as “main streets.” It is proposed that Needham Street and the commercial part of Winchester Street be given the “main streets” design classification. These streets traverse centers of commercial

activity and should be designed to provide frontage for high density buildings, shops, and open space. A “main streets” design calls for there to be parallel parking on the street, wide sidewalks, and street trees. As new buildings are developed, they should be aligned on short setbacks to the street. These roads are intended to have a pedestrian-friendly design and be strongly pedestrian oriented.





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Private Roads and Alleys should be encouraged to be developed to connect rear parcels and to provide for access between businesses so that auto drivers will not need to access Needham Street for all short trips. Specific connections that are encouraged include a connection between Tower Road and Oak Street. Also, a rear connection from Tower Road to the existing parallel private roadway behind Avalon Bay is recommended. On the opposite side of Needham Street, connections between Charlemont Street, Industrial Place, and Jaconnet Street are encouraged, with future connections that may extend from these streets to Winchester Street. In cases where major rear interconnections are being considered, it may be appropriate for the City to obtain control over ownership, construction, and maintenance of these new roadways.

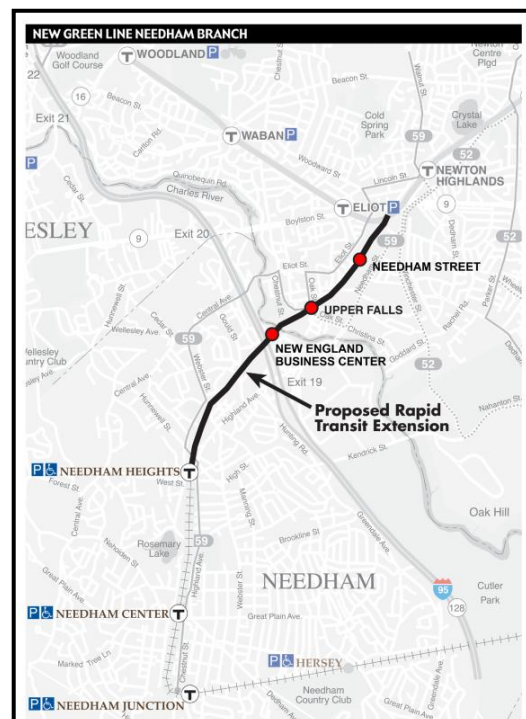
### Policies for Roadway Design in the corridor

In designing streets in the Needham Street corridor, the intent of providing equal access to all types of users should be of primary concern and the design of streets must be consistent with the Complete Streets paradigm. This approach will force us to think more about the goals of how much traffic we want on a street, rather than to submit to what a traffic model may say is necessary. Priority for streets in the Needham Street corridor must be first for pedestrians, then public transit users and cyclists, and finally motor traffic. The focus is on place accessibility: getting people to their destinations by networks of high connectivity, without detours, and within a context for transit use and walkability. The design classifications expectation for Needham Street is one where access has a greater value than mobility and where roads will not necessarily allow free-flow of traffic at all times. In the Needham Street corridor, local distinctiveness, visual quality, and how well the roadway will encourage social activity will be extensively considered.

### *Transit Improvements in the Needham Street corridor*

In unused rail corridor that runs parallel to Needham Street and Highland Avenue provides an opportunity to introduce high capacity light rail service to the Needham Street corridor. With the extension of the Riverside “D” line along the corridor between Newton Highlands, Newton Upper Falls, and Needham, this would allow for direct rail access of this area to the Longwood Medical area and to other downtown Boston locations.

For a transit project to be successful, it must provide public benefits in numerous ways. In addition to improving mobility options and allowing alternatives to automobile use for transport, the project should have a positive impact on air quality and the environment. It should improve service quality for transit users and allow access between neighborhoods and jobs. It should promote economic and land use benefits in its surrounding area. Most importantly, it must fulfill criteria of cost



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effectiveness. The Newton-Needham light rail extension meets all of those criteria and is therefore supported as a project for further analysis and eventual implementation.

### Ridership: Utilization and Impact on Mobility

The recent ridership analysis as presented in the 2010 Program for Mass Transportation predicts that the daily ridership change on mode for the Needham light rail extension will result in 6900 – 9400 unlinked trips and 1000 – 1400 unlinked trips. This substantial ridership estimate is based on population demographics that show high residential and commercial densities within a 10 minute walk of the corridor and potential new stations. On the Newton side, where a Needham Street station and a Newton Upper Falls station are proposed, most of the residential dwellings are located north of the proposed line. According to the US Census (2000), this part of Newton falls within census tract 3741, encompassing the area south of Route 9, east of the Charles River, and roughly west of Winchester Street (Reference: <http://factfinder.census.gov>). There are 3964 residents who live within walking distance of the new rail stations. Within ¼ of the proposed Upper Falls station, there are about 505 dwelling units, including several apartment and condominium complexes. Near the Needham Street station, there are about 700 dwelling units within ¼ mile, including the Avalon Bay apartment complex, which has added about 600 residents adjacent to the rail line, bringing the population to 4500 persons within walking distance of the two stations. The Avalon Bay project now has the largest number of affordable housing units in Newton. The overall residential density is about 7-10 units per acre north of the rail line, making this area appropriate for rail transit.

On the southern side of the rail line, within ¼ mile walking radius of the two stations, and including the village of Newton Upper Falls, there is a large amount of commercial space. Along Needham Street and its adjacent streets, there is about 2 million square feet of office, retail, and industrial space. In addition, there is about 500,000 square feet of additional commercial space in other areas within ¼ to ½ mile distance from the proposed stops. Overall, that represents about 2.5 million square feet of commercial real estate, representing 15% of the tax base of Newton. As such, this area represents a significant source of jobs for our regional economy. Using an average of 766 square feet per worker for commercial buildings, there are about 3200 employees within walking distance of the rail line.

An analogous nearby region can be used for comparison and to validate the above estimate. In nearby Newton Centre, there are about 2000 dwelling units within ¼ mile of transit, with a residential density of about 7.4 units/acre. Newton Centre has a mixed-use commercial core with 582,000 square feet of commercial space. There are 1563 daily boardings on rail transit at the Newton Centre MBTA stop, with 1422 inbound riders and 141 outbound riders.

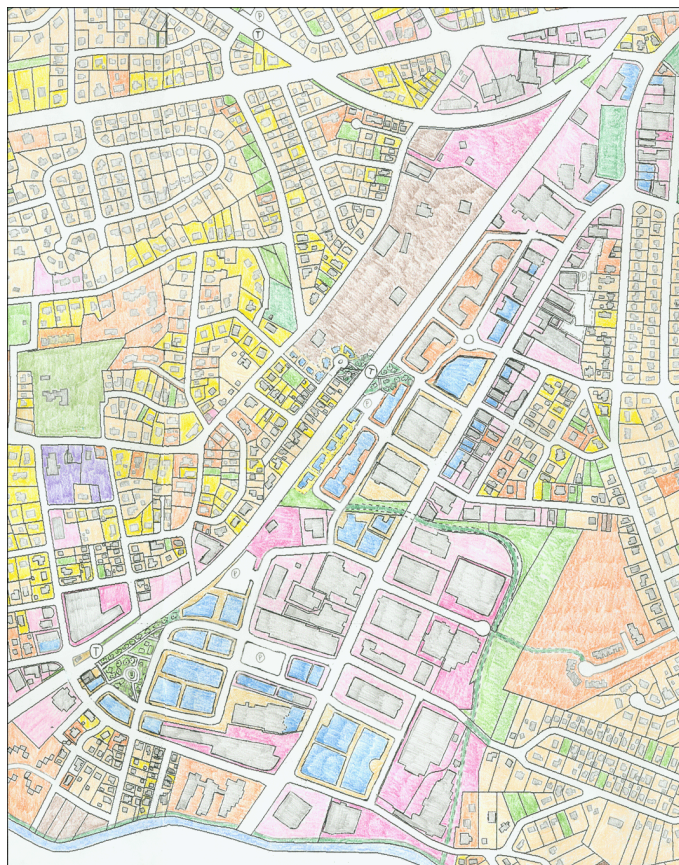
### Effect on Development and Reduction of Single-mode Auto Trips

As noted, there is tremendous potential for further economic growth of the Needham Street corridor. With a new rail line, this new economic development would integrate well with stations on the light rail extension, allowing the opportunity for transit-oriented development. Currently, the 55 parcels along Needham Street have a land area of about 2.7 million square feet, with almost 900,000 square feet of leasable commercial space, representing an FAR of

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about 0.3. By incorporating light rail transit, the density of the corridor could be increased to at least FAR of 0.5. That would add 1 million square feet of new space directly on Needham Street. The adjacent streets have a land area of about 2.3 million square feet and a current leasable space of about 1.1 million square feet. Allowing increases in FAR from 0.5 to 0.8 would create about 700,000 square feet of new space. Finally, in the area of Oak, Chestnut, and Elliot Streets, there is a commercial land area of about 1.4 million square feet with about 500,000 square feet of leasable space, for an FAR of about 0.3. In this area, doubling the density to 0.6 would create about 500,000 square feet of new space. Therefore, about 2.2 million square feet of new commercial real estate would be have access to the new light rail line within about a ¼-mile radius.

The Needham Street corridor is overwhelmed with automobile traffic, congestion, and travel delays caused by high automobile utilization and poor transit access in this area. Currently, Needham Street carries about 30,000 vehicles per day, Route 128 carries about 140,000 vehicles per day, and Route 9 carries about 60,000 vehicles per day. Existing travel delays along Needham Street are about 86.74 vehicle-hours (total vehicle delay) (Reference: Needham Street Travel Delay, McMahon Associates). With ridership estimates showing significant utilization of the new light rail line, it is likely that about 5000 trips can be reduced from both Needham Street and Route 9. This represents a significant reduction in traffic density for both of these congested corridors, allowing reduction of Route 9 traffic by about 10% and of Needham Street traffic by almost 20%.



### Environmental and Air Quality Benefits

The combination of new transit ridership and reduced automobile utilization and congestion along presently clogged arterials will allow for a major reduction of pollutants on a regional level. Environmental benefits will accrue in terms of reduced carbon monoxide levels, nitrogen oxide, volatile organic compounds (4417 – 5975 tons), carbon dioxide, and particulate matter. In addition, fewer cars means less noise and fewer accidents. Taking account a full trip from Needham to Boston, it is likely that annual travel time savings on the order of 1.5 million hours will take place on implementation of the rail line, and this will result in significant mobility improvements. There will be a net result in annual regional energy consumption of about 50,000 million BTU (British Thermal Units). Therefore, in terms of

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mobility, environmental benefits, and energy savings, the light rail line will rate highly compared to any other transit projects in the Boston regionl

### **Improved Transit Service**

Having light rail service to Needham Heights would drastically improve transit service quality in this region. Because the light rail line would run from 5 AM to 1 AM, with about 6 trips per hour in each direction, transit service would be vastly enhanced in this section of the metropolitan area. Currently, there is no other direct transit access to Boston from the Newton side within 1/2 mile of the corridor. The #59 bus runs from Needham to Watertown twice per hour, bypassing the Needham Industrial Park and Business Center and making stops on Needham Street only about once per hour. The commuter rail line ending at Needham Heights makes the trip to Back Bay, Boston in about 35 minutes. The new light rail line would make the trip in about 25 – 30 minutes, shorter from the Newton side. These travel times compare very favorably with driving, being much faster during rush hours, when travel to Back Bay, Boston can take 40-50 minutes from the Route 128 region along Route 9, not including parking. In terms of pricing, if fares on the rail extension were priced the same as those of the Riverside line, a round trip fare would cost \$4.00 (less with a monthly pass, especially one that is employer-subsidized).

### **Employment and Equity**

In terms of environmental justice, this project scores highly. Access will be improved to jobs for individuals living in Boston and other inner core communities. With 10 million square feet of commercial space and employing about 10,000 workers, the Needham rail line would open tremendous opportunities for citizens of core regions to access jobs. Bus routes which would feed into the line include the #9 (South Boston), the #1 (Roxbury-Dudley), the #66 (Roxbury), the #51 (from Forest Hills). This ridership would entail a significant amount of “reverse commuting” from the City of Boston to the Newton-Needham area, adding to the utility of the line. With regards to local households, the line passes adjacent to the largest affordable housing project in Newton (Avalon Bay).

Regional transportation planning agencies should evaluate the Newton-Needham Green Line extension based on up-to-date demographic and economic information and reasonable study criteria. By such an appraisal, this project should be ranked as high priority within the framework of any future transportation planning and funding process.

### **Bicycle Accommodations**

The Transportation Advisory Committee recommends that Needham Street is designed to include bicycle accommodations. Specifically, as per the draft Bicycle Master Plan, Needham Street is intended to include bicycle lanes and be part of the major north-south route through Newton that will extend from along Centre Street between Newton Corner, Newton Centre, Newton Highlands, Newton Upper Falls and Needham.

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The Needham Street corridor must include facilities that promote the safe use of bicycles and that increases the comfort and ease of bicycling in Newton. A newly redesigned Needham Street should include bidirectional bicycle lanes on the roadway. In addition, as new development occurs in the corridor, requirements should be put into place so that bicycle storage and other infrastructure is implemented as part of the zoning and special permitting process.

As new development occurs in the corridor, the costs of bicycle infrastructure such as bicycle paths, signage, parking facilities, and employee showers should be included as part of the mitigation package for the project to offset increased automobile usage.

In addition to the major bicycle accommodation on Needham Street itself, new bicycle recreational paths should be considered in the corridor. A path along the Charles River between Echo Bridge and Cutler Park should be considered. Also, a connection across the Charles River near Christina Street and extending to the Needham Industrial Park across the unused railroad bridge near HC Stark can provide a new route of access for non-motorized vehicles and pedestrians. The rail line that crosses over Needham Street connects to this southern bridge over the Charles and may serve as a shared use path for walking and bicycling. In addition, a series of interconnected rear roadways parallel to the proposed rail extension may provide further access for bicyclists, cars, and pedestrians. Finally, a new rail station near Avalon Bay that connects to the Elliot Street neighborhood may provide for a pedestrian and bicycle crossing and help integrate the residential neighborhood with the commercial district along Needham Street similar to the way that pedestrians can cross the rail tracks at Chestnut Hill and Eliot Stations currently on the Green line.

### **Summary and Conclusion**

The Needham Street corridor provides an excellent illustration of how the planning principles and policies recommended by the Transportation Advisory Committee may be implemented. Using a system of design classification allows us to envision the corridor as it is intended: a place of high economic activity with improved access and pedestrian amenities. The Complete Streets paradigm requires that future planning in the corridor respects the transportation and access needs of all users, with pedestrians having the highest priority. Current density of the corridor, along with the potential of new growth, offers the opportunity to realize new transit opportunities in the form of a light rail extension – with significant economic benefits. And as roadways are planned and reconstructed, bicycle access must be included so that bicyclists can ride safely and with comfort.

Furthermore, policies that reflect urban fabric, parking, and economic development can relate to issues of zoning and design as it affects the corridor. A future Needham Street corridor can reflect some of the most desirable aspects of our existing villages while taking into account contemporary land use and building practices. New development can take place with consideration of existing recreational and open space amenities and can help us realize new public and civic space in the corridor. All of this can take place to create a more attractive and

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integrated physical environment that will be consistent with the intent of Newton's Comprehensive Plan and that will be welcomed by the community.

## **Subcommittee/Topic**     Urban Fabric

### **Proposed Policy Recommendations to TAC:** Widen streets to accommodate all modes of transportation.

The increasingly heavy traffic in Newton dictates widening streets and seeking new transportation routes for the future local and regional growth. This is also necessary for accommodating non-motorized modes of transportation. Widening streets by taking private properties by eminent domain is not politically expedient, therefore the additional land should be sought through new private and public developments. 80% of Newton streets are too narrow to accommodate all modes of transportation. Every substantial snow storm severely impedes non-motorized traffic.

### **Action Required:**

Widen Newton streets within new developments by creating zoning incentives for private and public developers. These incentives should include additional gross floor area in exchange for donating parts of private properties for the public use of pedestrian and bicycle paths and parking. Also, we recommend to extend and amend the Planned Multi-Use Business District rules (PMBD) to all mixed-use projects in Newton, regardless of their lot size. This initiative should begin with the implementation of the large projects such as Riverside Station redevelopment, the Marshall Plaza development, the Austin Street building, the Cypress Street parking garage and the Firefighters Triangle development.

Create a new transportation venue within the former Hartford Railroad that would connect Newton Highlands T station to Needham Heights station. Make all Newton private streets publicly accessible and pave them in accordance with Massachusetts transportation codes. Turn all Newton paper streets into publicly accessible pedestrian and bicycle paths.

### **Recommended Timetable:**

The approval and construction of above listed projects should take from 2 to 5 years.

### **Staffing and Other Resources needed:**

Departments of Planning, Engineering, Information Technology, community volunteers, civic initiators and the teams of architects and developers.

### **Cost Implications:**

The salaries of the above listed departments' staff, fees for consulting specialists. The cost of materials and labor for construction should be determined by the prevailing wage law and the market fluctuations.

### **Executive summary:**

These proposals should be guided by the Newton Comprehensive Plan, the Mixed-Use Task Force and the studies by Newton Economic Development Committee. The extension and amendments of the PMBD rules and the zoning incentives should be proposed by the community representatives and the mayor and approved by the Board of Aldermen. Specifically, we have contacted local developers and real estate agents who suggested the additional gross floor area incentives in the amount of the total land area that would be



donated for the public use of pedestrian and bicycle paths mentioned above. These proposals are discussed in greater detail with diagrams in the additional submittals.



## **Subcommittee/Topic**     Urban Fabric

### **Proposed Policy Recommendations to TAC:** Create and implement the Span the Pike Plan

Massachusetts Turnpike split Newton into southern and northern parts of the city and severed 18 streets within the city's boundary. Currently, 9 bridges connect these parts of Newton but they contain only narrow sidewalks and are not safe for pedestrians and cyclists. Spanning the Pike is expensive and requires the construction of tall buildings such as Crown Plaza Hotel in Newton Corner to justify the investment. Therefore, we propose a phased-out Span-the-Pike Plan to create a new mid-rise developments across the Turnpike's air rights and to establish a better connection between the southern and northern parts of Newton. These structures will accommodate all modes of transportation and parking garages.

#### **Action Required:**

Organize a design competition for the Plan to produce the following:

A mid-rise, mixed-use structures over the Pike on both sides of Walnut Street and Lowell Avenue in Newtonville; the same on both sides of Chestnut Street in West Newton; the same on both sides of Washington Street in Auburndale; the same on both sides of Commonwealth Avenue in Auburndale.

#### **Recommended Timetable:**

The design competition and selection of winners – 1 year, the construction of Newtonville project – 3 years; the West Newton project – 5 years; the Auburndale project 5-10 years.

#### **Staffing and Other Resources needed:**

Planning, Engineering, Information Technology departments of Newton, community volunteers, civic initiators and the teams of engineers, architects and developers.

#### **Cost Implications:**

The salaries of the above listed departments' staff, fees for consulting specialists. The cost of construction materials and labor should be determined by the prevailing wage law and the market fluctuations. Business plans should be included in the program for the design competition. The sources of financing should be sought from private corporations, the state and federal grants.

#### **Executive summary:**

The Massachusetts Turnpike driving lanes are owned by the State of Massachusetts, the commuter railroad - by its owners and the shoulders on both sides – by the City of Newton. The idea of using the air-right developments in Newton has been discussed for many years. Several local architects proposed conceptual plans for the parts of the Pike but so far did not have successful following. This is time to continue their efforts.

## **Subcommittee/Topic     Urban Fabric**

### **Proposed Policy Recommendations to TAC: Redesign and reconstruct Route 9**

The current Route 9 is not its original highway anymore but a clogged transportation venue with many interruptions. In 1955 Route 9 had 6 travel lanes, but currently it has 4 travel lanes. The rest of its width was taken by private properties and access roads. However, the route's Right Of Way allows the accommodation of a 4-lane boulevard with the central and side landscaped medians, wide sidewalks and bike lanes. Some of the current traffic jams at traffic signals can be substituted with roundabouts and crossing streets can be relocated to above or below grade thus freeing the road from traffic signals, improving the flow of traffic, reducing pollution and creating aesthetically valuable transportation corridor similar to Commonwealth Avenue.

#### **Action required:**

1. Create the Route 9 overlay zone within Newton Zoning ordinances in order to attract private and public developers.
2. Work with the state transportation authorities and neighboring communities.
3. Create Route 9 Master Plan.

#### **Recommended Timetable:**

The overlay zone – 1 year; the Master Plan – 2 years; reconstruction – 5-10 years.

#### **Staffing and Other Resources needed:**

Planning, Engineering, Information Technology departments of Newton, Massachusetts Department of Transportation, community volunteers, civic initiators and the teams of engineers, architects and developers.

#### **Cost Implications:**

The salaries of the above listed departments' staff, fees for consulting specialists. The cost of construction materials and labor should be determined by the prevailing wage law and the market fluctuations. Business plans should be included in the program for the design competition. The sources of financing should be sought from private corporations, the state and federal grants.

#### **Executive summary:**

Route 9 should become a high-density corridor of urban fabric. Currently and in the foreseeable future neither the city of Newton, nor the state of Massachusetts have funds to follow this proposal, therefore we recommend to seek these funds within private and public developers who can build profitable structures and accommodate the road improvements. In order to achieve that goal the City of Newton should attract the developers by creating the above mentioned overlay zone.